FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

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USDA Report Indicates Halt in Swine Expansion

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — Official interpretation of the U.S. Department of Agriculture pig crop report for September indicates that the projected estimate of December-February farrowings of sows—down 4% from last year—reveals there has been a definite halt in swine expansion and there are indications of a reversal in the production trend.

This projected estimate from the USDA's quarterly report—based on the pig production intentions of farmers in the 10 corn belt states, which accounted for 75% of the nation's total pig crop in 1958—is also supported by the fact that the latest estimate of a 5% increase in the fall pig crop is two percentage points below the earlier estimate.

The crop reporting board makes these observations in its quarterly analysis of the hog outlook:

● The number of sows farrowed and intended to farrow this fall (June through November) for the 10 corn belt states is 5% larger than in 1958 and 23% larger than the 1948-57 average. The Sept. 1 survey indicates a decrease of 2%, or 95 000 sows, from the farrowing intentions reported for these states June 1, 1959.

● During June, July and August, the 10 corn belt states farrowed 2,426,000 sows—4% more than during the same period a year earlier, but 1% less than was indicated for this period in June.

● The number of sows bred and intended for farrowing in September, October and November is lower than previously predicted. The 2,075 000 head in this category amount to 5% more than a year earlier and 14% above average, but number 3% less than farrowing intentions reported for the corn belt in June.

● Reported breeding intentions for the December-February winter quarter in the 10 states indicate that the number of sows farrowing will be down 4% from a year earlier, thus reversing the recent trend of contin-

(Turn to SWINE, page 115)

No Definite Plan Submitted Yet In Chemell Case

By Special Correspondent

ATLANTA, GA.—After two hearings and several hours of testimony here by L. A. Chemell, no action was taken this week on a reorganization plan to allow a six-month moratorium on a reported million and a half dollars owed some 125 creditors by three Chemell corporations.

Attorneys for Mr. Chemell told the creditors committee in federal court here Thursday that no definite plan could be submitted until a complete audit has been made of the various Chemell corporations as authorized by J. Ellis Mundy, referee in bankruptcy.

At a previous meeting of creditors in Gainesville, a committee was formed with Al O'Brien of Ralston Purina Co. as chairman. In a preliminary financial statement submitted by Chemell attorneys, liabilities for Gainesville Hatchery, Inc., one of

(Turn to CHEMELL, page 8)

Way Opened to Add Or Sub Antioxidants In Medicated Feeds

ST. LOUIS—The Food and Drug Administration's Aug. 14 relaxation of its "freeze" on certain medicated feed formulations again has opened the way for the addition or substitution of antioxidants in poultry feed mixes, according to Monsanto Chemical Co.

The company reports that "many" feed mills already have obtained FDA clearance on label changes showing its Santoquin brand of 12-dihydro-6-ethoxy-224-trimethylquinoline as the new antioxidant in medicated poultry feeds containing both arsenicals and new drugs.

The "freeze" situation had prevailed under certain circumstances for feeds containing arsenicals and estrogens because of FDA policy under the Delaney amendment to the food additives law. The Aug. 14 regulation modifying procedures in connection with supplemental new drug applications permits "minor" changes in "new drug" medicated feeds without requiring supplemental applications (Feedstuffs, Aug. 15). The

(Turn to ANTIOXIDANTS, page 115)

Quaker Reports Record Feed Sales

CHICAGO — Mention of a record feed volume and comments on the "ever changing feed situation" were part of The Quaker Oats Co.'s report this week for the year ended June 30, 1959.

The annual report noted that sales and net earnings were up for the seventh straight year. Net sales for the year were approximately $322.2 million, compared with $314.5 million in 1957-58. Net income was $13,166,850, compared with $12,918,701 the

(Turn to QUAKER, page 114)

Survey Committee Makes Predictions on Poultry Prices

CHICAGO—Looking ahead to the October-December quarter and beyond, the Poultry Survey Committee sees egg prices below a year earlier, broiler prices at about the same level as for the same period last year and slight increase in turkey prices.

The five-member group composed of university and college agricultural economists makes these predictions in its current quarterly report:

● Egg prices during October-December will average about 36¢—2¢ below a year earlier. The first half of 1960 will likely average 1-2¢ doz. above the 31¢ average for the same period of 1959. The hatch of egg-type chicks in the first half of 1960 is expected to be 4-8¢ above a year earlier.

● Broiler prices for the October-December quarter will average about the same as the 15.6¢ average for the same period of 1958. Prices during January-March of 1960 are expected to increase to near the 17¢ level of a year earlier.

● Turkey prices during the October-December heavy marketing period will average about 24 5¢—1¢ higher than last year. The 1960 turkey crop is likely to be larger than the record crop of this year.

This outlook picture is result of a study by: Dr. Ralph L. Baker, Pennsylvania State University; Dr. S. Kent Christensen, Oregon State College; Dr. William R. Henry, North Carolina State College; Dr. Richard L. Kohls, Purdue University, and Dr. Henry Σ.

(Turn to POULTRY SURVEY, page 4)

Interest in Roughage Pelleting Continues to Show Increase

By ROGER BERGLUND
Feedstuffs Managing Editor

Interest in pelleting of roughages and complete rations for ruminants continues to mount, and it appears that a good many new installations for pelleting beef cattle and lamb rations are going in.

A check with sources familiar with the picture on a national basis indicates that, at least in some sections, interest in the past several months alone has been greater than at any prior time. However, immediate interest in in-the-field pelleting and in "impractical" types of installations is said to have eased off.

The interest that is being shown is evident in the feed industry as well as among feeders and feedlot operators, but to date there has, as might be expected, been more activity among operators of local or custom plants than among larger commercial feed plants.

Some people, of course, have been

(Turn to PELLETING, page 111)

FEEDSTUFFS *Features This Week*

FEED PRODUCTION: The annual Feed Production School in Kansas City (being held this year on Sept. 23-25) focuses particular attention on the need for top efficiency in all phases and all types of feed mill operations. In line with this, Feedstuffs this week presents a number of special features:

Pelleting Ruminant Rations	1	Let's Take Another Look	30
Mobile Milling Operations	12	Successful Custom Milling	56
Computer Formulation	18	Pelleting for Peak Production	84

BROILER COMPETITION: Delmarva's economic struggle with other broiler areas is outlined on **page 10.**

POULTRY PROGRAMS: An article on **page 22** describes a dealer's started pullet program. See **page 10** for a round-up on contract and credit provisions in the South.

NUTRITION: Use of a high-fiber poultry feed from growing through laying period is outlined on **page 60.** Research on roughage-concentrate ratios in steer rations is reported on **page 62.**

— REGULAR FEATURES —

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Joe Brooks	42	Worth Looking Into	88
Putting Research to Work	44	Convention Calendar	96
Feed Control Comment	54	Feed Markets in Detail	112

'Wide Potential' Noted For New Antibiotic

INDIANAPOLIS—A new antibiotic, called tylosin, was described this week as having "wide potential applications, particularly in agriculture."

The discovery and possible uses of the antibiotic were reported by Eli Lilly & Co. scientists at the American Chemical Society meetings in Atlantic City, N.J.

(Research on tylosin also was reported at the recent Poultry Science Assn. meeting—Feedstuffs, Sept. 5.)

"Tylosin is effective against a number of gram-positive bacteria and is relatively nontoxic, readily soluble and relatively stable in solution," a Lilly announcement said. "It is nonirritating when administered by injection or as a dust treatment. Palatability of feeds and drinking water is not affected by the addition of tylosin."

According to Dr. J. F. Downing, director of Lilly's agricultural research, experiments indicate that tylosin is "highly effective" in inhibiting pleuropneumonia-like organisms (PPLO) involved in chronic respira-

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FEEDSTUFFS

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Top of the Hopper

FOR MANY FEED FIRMS, the traditional methods of producing and marketing feeds never have been challenged to the extent that they are today. On the one hand, there are changes in methods and programs within this highly competitive industry itself which present plenty of problems in holding and building markets. On the other hand, the conventional feed business faces the challenge—particularly among the larger livestock and poultry operators—of farm or feedlot processing and mixing of feeds from, or just about from, the ground up.

Granting some license for exaggeration, one veteran feed man observed the other day that "just about everybody these days is both producing feed and feeding livestock and poultry." He was referring to (1) a growing number of feed firms, not only in southeastern and other integrated operations but in other areas, too, which feed their product to their own birds or animals on their own farms or feedlots, and (2) the increased number of large-scale farms and feedlots which process their own feed.

Some reference to this type of thing is found in an article by Larry Alley on page 30. The attention of feed men who make a full line of feed at higher labor, ingredient and overhead costs is called to "very efficient broiler factories, egg factories and commercial producers of pork and beef who are operating their own highly specialized feed plants at less than ½ man-hour per ton. In many of these, they not only are making the feed with nearby ingredients but they are feeding it automatically."

For the conventional feed operation, the competitive problem to a great extent is in marketing and distribution. However, production costs are a mighty important factor, too, and particular attention is being focused on this production factor with the holding next week of the Feed Production School. Perhaps never has it been more important to acquire and apply the type of information which the Production School offers in helping show the way to greater mill efficiency. In fact, one feed manufacturer said frankly that he would be out of business today had he not taken and applied the cost standard and cost study material presented at the school a couple of years ago.

While the current challenges are great, there still are a good many feed men who are confident that they can use their science, know-how and resources to render a service which will more than justify their role in today's agriculture. As Mr. Alley observed in referring primarily to feed production, "if we take advantage of the men, machinery, materials, methods and money available to us, and do our very best job of analyzing, planning and scheduling, we should be pleased when we compare and take another look at just how we stand."

♥ ♥

PER CAPITA EGG CONSUMPTION in recent years has been declining, and one of the reasons for this long-run down-trend in demand for eggs is said to be the breakfast-time competition which eggs receive from highly advertised branded cereal products. For the feed industry, as well as producers, this is a pretty serious problem. Perhaps, as some persons have observed, eggs never can regain their former status as a morning staple unless they, too, are sold to a still greater extent on a branded and really well promoted basis. At any rate, the sponsors of some quality egg programs seem to have this sort of plan in mind. And, depending on how they can hold on in periods of low egg prices and attain greater stability in egg marketing over the long term, it may be that we have only seen the beginning of promotion of branded eggs on a broad scale over wide areas.

(Turn to **TOP OF THE HOPPER,** page 111)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Trading was just fair, but generally improved in the nation's formula feed industry this past week. There were indications from most regions that business was picking up. Movement of turkey feeds remained good and there was improvement noted in sales of egg mashes and dairy and hog feeds. There was nothing definite regarding the formula feed price trend. Although feedstuff prices averaged 75¢ ton lower during the week ended Sept. 15, the outlook for better demand was expected by some manufacturers to result in higher feed prices. It was believed in some corners that colder weather during the week would prompt some additional buying to build up depleted inventories. The index of wholesale feedstuffs prices was 74.3 this week. That's 1.1 points below the previous week and 7.6 points below a year earlier. The feed-grain index reflected a sharp drop in grain sorghum prices and weakness in corn and oats. It was 65.5 this week, 3.3 points below last week and 1 point below the comparable week last year. The hog-corn ratio, based on Chicago prices, was 11.2 this week, compared with 11 a week earlier and 16.2 a year earlier. (Ingredient prices in detail on pages 112-114.)

Northwest

Some encouraging signs poked their way into this region's formula feed business this week. And these indications were welcomed enthusiastically by manufacturers who last week recorded one of their poorest periods of the season.

Though demand is still spotty from day to day, the general feeling is that business is picking up and will gradually improve as heavier feeding catches on.

The current slump is hardly unusual, nor is it especially discouraging. Most manufacturers' businesses are running a bit ahead of last year at the same time and they have been able to keep going five days a week.

Except for independently firm alfalfa meal and millfeeds, ingredients were steady to weaker. Mixed feed prices are expected to drop off again slightly. It's expected that stronger demand will eventually bring about better feed prices, and when that happens, dealers more than likely will get back into the buying mood. Inventories appear to be low, but dealers seem to be waiting to see how low feed prices will go.

Southwest

Feed business in the Southwest continued to swing upward this week, maintaining a trend which started about 10 days ago. Most mills experienced better volume of sales this week than last and a full week's running time of five days was the general rule, with a few plants running through the sixth day.

Most lines of business were better, with the exception of broiler feeds which have been lagging in this area. The better egg prices of recent weeks apparently have encouraged buying of egg feeds.

Booking of new cattle feed business was reported by quite a few plants, and it is evident that toll of hot dry weather in late August and early September lowered pasture and range conditions over a wide area. Dairy feed business likewise picked up this week.

Turkey feed volume is showing the usual seasonal build up as the birds grow toward maturity and for mills that do a lot of this trade volume is now good.

Hog feeds appear to be holding their volume fairly well in spite of the dire predictions made for hog price trends this fall.

Many feed companies were in a quandary about their price cards. Early in the week, it appeared that prices were headed downward, but later, firmness appeared, with the result that price adjustments ranged from 50¢@$1 down at some mills to $1 higher at others, the timing of calculations being the main factor in the difference.

Northeast

Most commodity markets felt the impact of the early harvest of corn and soybean crops brought on by dry, hot weather.

Poultry feed and egg mashes lead sales, with dairy feed and broiler feeds following. Turkey feed sales fell off a bit.

Egg prices were unchanged from a week ago. Receipts were barely adequate to short for extra-large and large sizes. Medium and small were adequate. Demand improved and the market was fully steady.

Broiler prices were up ½@1¢ lb. from a week earlier.

Running time of mills averaged five days.

The mixer business continued to ride in the doldrums and buying continued on a "when and if" basis only.

Southeast

Southeastern feed demand continues to show a slight improvement each week. Most mills report their running time to be about steady.

The Southeast continues to cut back on its chick placements on farms and the price is holding steady at 15½@16¢ lb. for broilers, f.o.b. the farms. With lower cost for ingredients, good operators can now raise broilers on about a break-even basis.

Heavy rains in the Southeast for the last week caused corn prices to advance 5¢ bu., bringing the price to $1.40 bu., Georgia points. Cottonseed meal prices in the Southeast advanced $1 ton as a result of tight supplies and good interest from exporters and the domestic trade. Many feed ingredient buyers are now booking ahead some tonnages both of cottonseed meal and soybean meal. With heavy supplies of citrus pulp in store in Florida, and with slow demand, many processors reduced prices this week by $2.50 ton.

Central States

The week ending Sept. 16 found little or no basic change in the mixed feed business. While sales volume continues to be disappointing rather generally, there are a very few bright spots, but not in sufficient number to offset the draggy demand for practically all classes of commercial feeds.

The government crop estimate that came out Sept. 10, covering conditions as of the turn of the month, could well have added to the unsatisfactory situation in the mixed feed industry. While it is true the prospective oat crop for 1959 is far below that grown last year, the tremendous

(Turn to **MARKETS,** page 117)

Peter Hand

DOWN ON THE FARM

To help you produce better feeds, Peter Hand Research Farm conducts thousands of feeding experiments on poultry, swine and cattle. Latest scientific developments —vitamins, antibiotics and additives—are evaluated.

New formulations are tested under every-day farm conditions before they are recommended to feed manufacturers. The farm is comprised of 450 acres and more than a dozen buildings.

Scientists with specialized experience in poultry and livestock nutrition direct all work at the farm. For the answer to any specific feed problem, look for the answer *first* from Peter Hand research.

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Poultry Controls Pondered in Georgia

GAINESVILLE, GA.—The Georgia Poultry Federation has assigned its educational and research committee the job of studying the pros and cons of government production controls for the poultry industry, but, as was reported this week, the federation has no intention of pointing its efforts in any direction until a complete report from the committee has been completed. And even then, the matter "probably will be considered by the entire federation membership."

Albert R. Gibson, executive secretary, said the control question was brought before the federation board last week and was turned over to the special committee, of which Dr. C. K. Laurent, general manager, Marbut Milling Co., Augusta, is chairman.

Mr. Gibson said the committee is making a study of the possibilities of both long and short range control programs, but a report, even of a preliminary nature, "is unlikely in the immediate future."

The very few producers who voiced an opinion in favor of controls, he said, were those who were "in desperate financial straits" and were "clutching at a last straw." He added that the federation has been opposed to controls, and believes the industry can best weather the storm and solve its own problems without government intervention. No specific plan for setting up controls has been presented by anyone, according to Mr. Gibson.

Koos Firm Starts New Feed Products Line

KENOSHA, WIS. — A new line of feed products called Royal Ribbon has been established by N. S. Koos & Son Co., manufacturer of plant foods and chemicals.

This new diversification gives the Koos firm three lines instead of two during an entire year, officials pointed out.

Royal Ribbon Feed includes beef, dairy, poultry and swine programs. Farmers have a choice of using part or all of any program, depending upon individual need and availability of roughage and grain.

Uncle Johnny Mills Picks Nutrition Chief

HOUSTON, TEXAS — Henry L. Jones has been appointed director of nutrition for the Uncle Johnny Mills laboratories, according to W. R. Archer, president.

Mr. Jones was formerly director of research and nutrition, Save Way Mills, Chickasha, Okla.

He obtained a B.S. degree in animal husbandry from the University of Pennsylvania and an M.S. degree in poultry nutrition from the University of Maryland.

POULTRY SURVEY

(Continued from page 1)

Larzelere, Michigan State University. Serving in an advisory and ex-officio capacity in the work of this committee are several additional economists from industry and the U.S. Department of Agriculture.

Organization of the Poultry Survey Committee was spearheaded by the American Feed Manufacturers Assn. in 1957, and the committee's work is now co-sponsored by four national organizations: AFMA, American Poultry & Hatchery Federation, National Turkey Federation and Poultry & Egg National Board.

The committee is to meet again Dec. 7-8 to develop the poultry outlook picture for the first quarter of 1960.

The committee's latest quarterly report on eggs, turkeys and broilers follows:

EGGS—U.S. farm egg prices during October-December, 1959, will average about 36¢ doz.—2¢ below a year earlier. January-June U.S. egg prices in 1960 will likely be 1-2¢ doz. above the 31¢ average for the same period this year. However, the price pattern for the first six months of 1960 will not be the same as in 1959. Prices will be lower than the first quarter 1959 average of 36¢ and higher than the second quarter average of 26¢.

The number of hens and pullets of laying age on farms Jan. 1, 1960 will be 1-3% less than a year earlier. This will result in slightly smaller supplies of eggs for the first half of 1960.

The slightly higher egg prices coupled with slightly lower feed prices should result in more favorable returns for the first half of 1960 than in the same period of this year.

The U.S. hatch of egg-type chicks in the first half of 1960 is expected to be 4-8% above the same period in 1959. The pattern of the hatch will likely show slight increases in the first three months, with larger increases relative to a year earlier taking place in the second quarter of the year.

The U.S. Department of Agriculture suspended its dried egg purchasing program at the end of August. It is not known when and if this program will be resumed.

TURKEYS—Turkey prices during the October-December marketing period will average about 24.5¢—1¢ higher than last year. Summer prices for toms were strong as anticipated but turkey fryer prices were weak due to heavy marketing.

While the number of turkeys produced in 1959 will set an all time record, the number marketed in the October-December period will be about the same as in the fourth quarter of 1958. At the same time, cold storage holdings at the beginning of the third quarter were about 18% below the same period in 1958, and are expected to continue well below year earlier levels.

The 1959 turkey crop of about 82 million is 5% over 1958. The number of heavy breed turkeys was less than 1% over last year, but light breeds increased 3.2 million head or 26%.

Higher consumer income, plus the announced government purchase program for turkeys, will result in a strong demand. However, demand will be affected somewhat by lower pork and broiler prices.

The 1959 government purchase program, as currently announced, will be under Section 6, which limits purchases to the amount of a product that can be distributed through school lunches.

The number of turkeys raised in 1960 probably will be greater than the record crop of 1959. The increase is expected to be largely in the heavy breeds. Several factors point to an expected increase in numbers. Slightly lower feed costs and a higher average turkey price will improve the 1959 profits picture as compared to 1958. Ample feed supplies at lower prices will be available in 1960. Early testings of breeder hens are well above a year ago.

BROILERS—Broiler prices for the October-December period will average about the same as the 15.6¢ average for the same period last year. Market supplies will be about 6% smaller than in the comparable period of 1958.

Demand weakness which was apparent in the preceding quarters seems likely to carryover into the fourth quarter. Prices during the late summer remained well below those of a year ago in spite of a reported 5% reduction in supplies. Several explanations have been advanced for the failure of prices to respond to reduced supplies:

1. Actual market supplies may have been greater than indicated by placement data. A comparison of placement and slaughter data indicates that differences often exist.

2. Several months of low broiler prices may have resulted in increased consumer resistance to a substantial short-run increase in price.

3. Broiler feature promotion by retailers may not have been as active as in previous periods.

4. Broiler demand may be weakened in times of rapidly rising income.

5. The sharp decline in pork prices may have resulted in increased competition for broilers.

The importance of each of these in causing the price weakness is not known.

Continued low prices in the fourth quarter will result in placements remaining below year earlier levels at least during the remainder of 1959. Therefore, market supplies during the early months of 1960 will be below 1959 levels. Prices during the first quarter of 1960 are expected to increase to near the 17¢ levels of the same period in 1959. Pork prices at this time will be very low. This, plus the possible continuation of other factors which have decreased demand for broilers, probably will restrain any significant rise in price above 17¢.

Hatching egg supplies will remain ample. Though fewer pullets have been added to the hatchery supply flocks in recent months, this will not be a major limiting factor at least until mid-1960.

C. E. Swick | Dr. Charles Lewis | W. F. Schafenacker

FORMULATION FOR PELLETING—Three men from Kent Feeds, Inc., Muscatine, Iowa, will handle the subject "Formulation of Feeds for Pelleting" at the 1959 Feed Production School, Sept. 23-25 in Kansas City. C. E. (Bud) Swick, Kent production manager and vice chairman of the production school committee, will be panel moderator. The other panel members are Dr. Charles Lewis, director of research and nutrition, and W. F. (Bill) Schafenacker, sales manager.

Co-op Reports Gain In Mixed Feed Sales

HARRISBURG, PA. — Mixed feed volume of the Pennsylvania Farm Bureau Cooperative Assn. at the end of July jumped 2,674 tons ahead of the comparable seven-month period last year. July tonnage was up 1,803 from the same month in 1958.

Mark S. Hess, PFBCA feed operations manager, explained part of the increase represented delivery of feed to the Eastern States Cooperative after two of its mills were closed.

"Our volume is holding its own in the face of a general 11% decline in mixed feed volume in the Pennsylvania-New York area," Mr. Hess said. Broiler rations are up 5,585 tons for the year, and "All Mash Layer" volume has more than doubled, he said.

Setting of Broiler Eggs Is Down 1%

SALISBURY, MD. — Hatcheries in the 22 important broiler producing states made a cutback in the number of eggs set last week.

They set 33,904,000 eggs, 13% less than the corresponding week a year ago, but only 1% less than the previous week. Settings were down from the previous week in 12 of the 22 states, with sharpest declines reported in Georgia, Missouri and Indiana.

Broiler chick placements in the 22 states totaled 25,585,000, 5% below the previous week and 6% below the corresponding week a year ago. Decreases from the previous week were reported for 16 states, with largest cuts in Alabama, Maine, Maryland and Georgia.

Broiler prices made a slight improvement in Delmarva, with the average price paid on the farm at 16.85¢, compared to 16.15¢ the week before. A year ago the price was 16.25¢. This is the first time in many months that this year's price was better than a year earlier.

Oklahoma Plant Strike Settled

ADA, OKLA. — A week-old strike by 36 members of the American Federation of Grain Processors was ended early this week at the Evergreen Mills feed plant here.

Harry Lundgaard, president, said that under conditions of the settlement the workers will receive an 8¢-an-hour increase in wages this year and another 8¢ increase next year.

It was reported that the workers struck after management had proposed that the plant go to a 10-hour day from an 8-hour day, retaining the weekly guarantee of 40 hours a week. Mr. Lundgaard said he offered the union workers a 5¢ increase this year and another similar hike next year. In the settlement, however, the old contract, calling for overtime pay after 8 hours a day and a guarantee of 40 hours a week, was retained.

Mr. Lundgaard said the strike was the first in the 58-year history of the company, which produces 57 types of feeds for livestock, poultry and pets, including pellets, cubes and crumbles. The mill has a daily capacity of 500 tons.

The plant remained open during the strike, but, as Mr. Lundgaard explained, sufficient numbers of additional workers could not be obtained to supply customers with feeds and services. The plant's 12 truck drivers were idle, refusing to cross the grain processors' picket line.

New Egg Program in Minnesota Announced

WINDOM, MINN. — The Bauman Egg Co., Edgar, Wis., has announced plans to build a new quality egg processing plant here and to buy quality eggs from farmers in the area.

Until the new plant is built, the company will rent a building here to receive and handle the eggs and then send them to Edgar for processing and packaging.

Officials said that farmers representing 148,000 hens already have indicated they plan to participate in the program. Made available to farmers on a trial basis will be egg coolers. The company said farmers will be paid a premium of up to 4¢ or more per dozen.

It was indicated that there will be no contracting with farmers for eggs and that no feed companies will be involved in the program. However, farmers will have to meet certain quality standards, including having a cooler, to sell eggs to Bauman. Officials said that many of the flocks probably will have 400-500 birds.

Now from Merck...

STABIMIX*

TODAY'S MOST STABLE FORM OF VITAMIN A WITH 100% BIOLOGICAL ACTIVITY...

The need: Except for newly-harvested crops, grains are notably deficient in vitamin A. Yellow corn, especially, loses much of its carotene in storage. Result: where animals feed on these grains, there is the likelihood that vitamin A deficiency can become a problem. In beef cattle, for example, vitamin A-deficient rations may result in night blindness, diarrhea and the birth of weak, blind or dead calves. In dairy cattle, poultry and swine, A-avitaminoses may produce equally serious and economic setbacks.

The product: To assure a properly balanced ration you *must* include vitamin A in your formulations. Yet what you want in a vitamin A supplement is high stability, 100% biological activity, *and* economy. Such a supplement is STABIMIX A.

The advantages: STABIMIX A is one of the finest, most dependable sources of vitamin A yet made available to the feed industry. A free-flowing, hard beadlet prepared from stabilized, synthetic vitamin A in a gelatin-type base, STABIMIX A is two to eight times as stable as fish oils under any condition you can name—heat, humidity, cold, pelleting, water dispersion, contact with minerals and antibiotic-vitamin mixtures. No longer need you worry about costly overages to offset deterioration. Unlike other sources of vitamin A, *the number of STABIMIX A units you mix with your feed stays with your feed longer!* It flows freely at all times, distributes evenly, and will not arch in hoppers of mechanical or vibrator feeders. Best of all, it saves you money in the bargain.

The convenience: STABIMIX A is packaged in easily-handled 50 and 100-lb. fiber drums. Various potencies are available to meet your every formulation need—including 10,000, 20,000, 30,000, 250,000 and 325,000 U.S.P. units per gram. Why not investigate for yourself the *stability, biological activity* and *profitability* of STABIMIX A in your feeds? Your Merck Sales Representative will be happy to discuss your needs. If you prefer, call or write Merck Chemical Division, Merck & Co., Inc., Rahway, New Jersey.

STABIMIX A

with **THE MERCK MARGIN OF SURETY**

MERCK

*TRADEMARK OF MERCK & CO., INC., FOR A STABILIZED, DRY VITAMIN A FEED SUPPLEMENT. ©MERCK & CO., INC.

acker, sales manager.

ume has more than doubled, he said. | probably will have 100-300 birds.

Questions on Storage Cost Survey Answered at GFDNA's Meeting

By GEORGE L. GATES
Editor of Feedstuffs

MINNEAPOLIS—The U.S. Department of Agriculture is making a study of grain storage costs to get at the "fairest possible approach to negotiations for a new Uniform Grain Storage Agreement," officials of the USDA's Commodity Stabilization Service told members of the Grain & Feed Dealers National Assn. country elevator committee here Sept. 13.

The country elevator committee meeting was one of several committee and other sessions held as part of a GFDNA work meeting Sept. 13-14 in Minneapolis. Meetings of other committees, including the feed committee, were largely planning sessions preliminary to the 1960 GFDNA convention March 6-8 in Kansas City.

Another feature of the Minneapolis meeting was a discussion of the St. Lawrence Seaway and its effects.

In the discussion of the storage cost survey, grain men, by the nature of their questions, indicated that they are more than a little doubtful that the types of questions to be asked in the study will yield an entirely "fair" picture of storage costs.

Leland C. Miller, Federal-North Iowa Grain Co., Cedar Rapids, Iowa, chairman of the committee, commented that he was impressed that the CSS wants "to do its job properly."

He also said that the committee has no objection to USDA men coming to elevators to conduct the "investigation" and that he believed most grain men will cooperate. "We will learn much about our industry, and I ask all members to cooperate," he said.

Government officials present raised a friendly objection to Mr. Miller's use of the term "investigation" in referring to the project. It is a survey and not an investigation, they emphasized.

Mr. Miller commented that the industry could not conduct a study of comparable scope, but that it would have to develop some figures of its own before negotiations start next year.

Main Concerns

Main concerns of the grain men, as revealed in their questions, appear to center on how the survey can reflect accurately the differences between costs of flat warehouses and traditional bins, how costs of shrink and quality deterioration (for which warehousemen are responsible under UGSA terms) can be determined and how the subject year, 1958, can be considered representative of cost experience. Comments were made to the effect that 1958 was a "perfect" year for grain storage operations.

Ray Pollock, director of the grain division of CSS, who was present with two associates to explain reasons for the study and the methods to be used, declared that "the survey will be as beneficial to the trade as to the government." Other government officials participating were Clarence Palmby, associate administrator of CSS, and Robert A. Hanson, deputy director of the grain division.

Background on reasons for the study was provided by Mr. Palmby. "Because UGSA is a contract, and some judgment had to be used in developing it, it is subject to investigation," he said.

Mr. Palmby noted that 2¾ billion bushels of grain now are owned outright by the government, with most of it in commercial storage. "We expect much investigation during the next several months. There is no one in CSS who does not welcome it." He indicated that the subcommittee of the Senate Agriculture Committee, headed by Sen. Stuart Symington (D., Mo.) is one of the congressional groups planning an investigation.

The survey, he indicated, will give CSS some of the information it will need to answer questions of investigators as well as provide a basis on which to negotiate the new agreement.

The first storage agreement was

(Turn to STORAGE SURVEY, page 116)

Dr. G. B. Belloff

Dr. M. W. Pasvogel

TEXAS CONFERENCE—Among the speakers scheduled for the 1959 Texas Nutrition Conference Oct. 7-9 are Dr. M. W. Pasvogel, vice president and director of poultry nutrition and research, Peter Hand Foundation, and Dr. George B. Belloff, in charge of veterinary clinical research and field trials, CIBA Pharmaceutical Products, Inc., Summit, N.J. Subjects to be discussed by industry personnel include feed additives under the new food additive law, the present status of coccidiostats, tranquilizers and egg shell quality.

Kansas City Firm Opens Commodity Unit

KANSAS CITY — The Higbee-Carlin Co., Kansas City, has announced the opening of a commodity department, with Charles Milnes as manager of the department. He will trade in oilseed and animal protein meals, grain and grain products.

Mr. Milnes has been associated with the J. P. Parks Co., Kansas City, and previously was manager of feed mills at Pawhuska, Okla., and Medicine Lodge, Kansas, and at one time was territory sales representative for A. E. Staley Mfg. Co., Decatur, Ill.

H. A. (Duke) Higbee and Lee Carlin are principals in the Higbee-Carlin Co., which maintains offices at 403 New York Life Building, Kansas City.

Consultations in K.C. Available to Feed Men

KANSAS CITY—Feed men will be able to visit without charge on Saturday, Sept. 26, the supply company consulting booths set up in the Continental Hotel here in connection with the Feed Production School, according to Lloyd Larson, president of the school.

Forty-two machinery, equipment and supply firms will have booths in the hotel to consult with school enrollees during the Feed Production School, Sept. 23-25, and the Small Mill Short Course, Sept. 26. In addition, feed men other than those at the school will be able to come in and visit with supply firm representatives on the 26th. Mr. Larson said that the consulting booth service will be available to anyone interested without charge all day Saturday.

"While these firms are bringing their technical men here for consultation with production school enrollees," he explained, "we felt that some feed men not enrolled in the school might avail themselves of the opportunity to come in Saturday without charge."

The Small Mill Short Course, in session all day Saturday, will require enrollment.

WESTERN FEED SUPPLY LARGELY ADEQUATE

DENVER, COLO. — The State Department of Agriculture has reported winter feed will be adequate to maintain present livestock breeding herds throughout the West except in the western Dakotas, eastern Montana and Nevada.

Fall and winter forage on ranges and pastures, however, will be above average only in Kansas, Oklahoma, Texas, New Mexico and Arizona.

In California, fall range and pasture are the worst in 20 years, but the hay crop is above average and fall rains still could improve the grazing prospects, according to the monthly report.

Says Bean Storage Good Risk on Farm

LAFAYETTE, IND. — A Purdue University agricultural economist says that unless the harvest time price of soybeans is above $2 bu., storage should be a good risk.

William S. Farris adds that soybean prices for the coming marketing year are expected to average substantially above the loan rate of $1.85 bu. Prices at harvest are likely to average a little above the loan rate.

Farmers considering storing beans at harvest and selling them later in the season need to know the cost of storage and a price forecast for some future date when the beans will be sold.

Prof. Farris figures storage costs will average 12 to 15¢ bu., not including the cost of storage space. This cost includes extra handling, interest, insurance, taxes and losses.

Using Indiana soybean prices since 1950, Prof. Farris notes that they have increased an average of 37¢ bu. from October to the following April. He adds, however, that in the last three seasons prices have risen only 17, 13 and 16¢ for the same storage season. This price spread, of course, about equals storage cost.

Pet Food Men Told of Advertising Problem

CHICAGO—A panel of advertising experts told pet food manufacturers at the second annual convention of the Pet Food Institute in Chicago recently that the greatest advertising problem confronting them is waste circulation—the people who don't own dogs.

Panel members who discussed "Which Advertising Media Is Best for You?" included: Arthur H. (Red) Motley, publisher of Parade Magazine; Norman E. Cash, president, Television Bureau of Advertising; Robert H. Alter, manager, sales administration, Radio Advertising Bureau, Inc., and C. E. Stiteler, Jr., sales manager, Western Empire Direct Advertising Co.

Panel members agreed that no one medium could do all the jobs required of advertising. They urged manufacturers to pinpoint advertising in the heavily dog populated suburban and metropolitan markets via print, radio, TV and couponing.

Mr. Motley said, "Almost all media are powerful, good and useful, if we bring to them the substantial fundamental marketing and merchandising knowledge which we ought to have. Everybody knows that certain markets, with more single dwellings, are better for pet foods.

"People can use media with flexibility," he said. "So many people are entranced with the emotional appeal of television, they want to grab a national show. It isn't necessary. Regional and local manufacturers of pet food can use television—or radio—or print. They are all available. They are all effective."

National Live Poultry Exchange Considered

By Special Correspondent

SPRINGDALE, ARK. — Formation of a national live poultry exchange operation similar to the egg, butter and grain exchange operations is reported under consideration by New York and Arkansas financial and poultry interests.

Henry Thomason, manager of the newly formed Arkansas Poultry Exchange, Inc., at Springdale, said, however, that plans for the exchange are "only in the preliminary stage. We are not at all certain what will be worked out," he said.

Mr. Thomason said conferences concerning the projected exchange will be held in coming weeks. He said something definite may be known by Oct. 22, when the Arkansas Poultry Exchange holds its annual stockholders meeting here. This exchange operates a poultry auction in Springdale.

According to Mr. Thomason, Joseph Friedman of the Joseph Friedman Brokerage Co. of New York, is studying establishment of a live poultry exchange operation. Mr. Friedman is scheduled to speak at the Arkansas group stockholders meeting.

Oilseed Meal Futures Contracts on Decline

MEMPHIS, TENN. — Most contracts in oilseed meal futures suffered a decline on the Memphis Board of Trade during the past week.

Soybean oil meal futures drifted lower as the eminence of the soybean harvest and lack of buying incentives combined to keep most traders on the sidelines.

Cottonseed oil meal options suffered price erosion as new cottonseed in modest amounts was received at mills in this territory and crushing operations were resumed.

Traders said that no significant improvement has been reported in mixed feed business generally, and unsatisfactory feeding ratios continue to bring cautious buying of feeds. The estimated 532,669,000 bu. of soybeans added to the 50 million bushels carryover, would indicate ample supply of soybeans for the season. They said this tended to further restrict speculative enthusiasm for the long side of new crop positions.

Memphis basis soybean oil meal closed Sept. 15 unchanged to $1 ton lower than on Sept. 8. Unrestricted soybean oil meal was 30@80¢ lower, and bulk solvent cottonseed oil meal was $1 lower to 25¢ higher.

Hubbard Milling Co. Names Vice President

MANKATO, MINN. — Quentin J. Marsh has been elected vice president of Hubbard Milling Co., according to C. B. MacLeod, chairman of the board. Mr. Marsh will continue also as manager of the feed division.

Q. J. Marsh

Mr. Marsh, who has been with Hubbard since 1952, served as advertising and promotion manager at Mankato, sales manager for the Mankato-Dakota area and manager of the company's Cedar Rapids branch before returning to Mankato a year ago as manager of the feed division.

He served in the U.S. Air Force from 1940 to 1945 and received a bachelor's degree in technical agriculture in 1948 from the University of Minnesota.

He served for a time as assistant county agent and as county agent for two years in Blue Earth County, Minn., before joining Hubbard.

inal note on which Talcott financing

Northwest Feed Group Elects A. H. Roffers President for 1959-60

MINNEAPOLIS — A. H. Roffers, Northwest Cooperative Mills, Inc., St. Paul, was elected president of the Northwest Feed Manufacturers Assn. this week at the group's first meeting of the 1959-60 season. Mr. Roffers, who previously was a vice president, succeeds Ted Harstad, Doughboy Industries, Inc., New Richmond, Wis.

Nearly 200 feed men, allied tradesmen and guests attended the session held at the Calhoun Beach Hotel here in connection with the annual Animal Health & Nutrition Short Course conducted by the University of Minnesota Institute of Agriculture.

The association's vice presidents are: Richard Blomfield, Blomfield-Swanson, Minneapolis; Ogden Confer, feed division, Hubbard Milling Co., Mankato, Minn., and Frank T. Heffelfinger II, Peavey Feed Mills, Minneapolis.

Roger Berglund, Feedstuffs, was reelected secretary, and Clyde Kennedy, Archer-Daniels-Midland Co., Minneapolis, was named to succeed Mr. Blomfield as treasurer.

Board members for the 1959-60 season are: Mr. Blomfield; Jack Conlee, Osborne-McMillan Elevator Co.; Mr. Confer; E. C. Fuller, Nutrena Mills, Inc.; George L. Gates, Feedstuffs; Mr. Harstad; Mr. Heffelfinger; L. C. Kindstrom, Kindstrom-Schmoll Co.; Clifford Olson, Glencoe Mills, Inc.; Darrel M. Runke, International Milling Co.; C. A. Scott, Merck & Co., Inc., and John Weddle, Russell-Miller Milling Co.

Guest speaker was E. William Boyer, president, Minneapolis Area Chamber of Commerce, who talked about the prospects of professional baseball and football in the Twin Cities.

Montana Poultry Day

BOZEMAN, MONT.—A poultry institute will be held at Montana State College Sept. 26 for producers, processors, feed dealers and others concerned with the industry.

Poultry research being conducted at the Montana Agricultural Experiment Station will be reviewed at the morning session and visitors will be taken on a tour of the poultry industry department farm.

Dr. Hill Named Head Of Poultry Department

BERKELEY, CAL. — Dr. Frederic W. Hill, professor of poultry husbandry at Cornell University, will become chairman of the University of California department of poultry husbandry at Davis Oct. 1, according to Dr. Daniel G. Aldrich, Jr., dean of agriculture at the University of California.

Dr. F. W. Hill

Dr. Hill succeeds Dr. G. F. Stewart, who is now chairman of the recently amalgamated departments of food technology and dairy industry which have become the single department of food services and technology.

Dr. Hill received the Tom Newman Memorial International Award for poultry husbandry research for the most important contribution to poultry husbandry research work published in 1958. Other awards he has received include those of the Poultry Science Assn. and the American Feed Manufacturers Assn.

He received his B.S. and M.S. degrees in poultry at Pennsylvania State University, and his doctorate at Cornell in animal nutrition.

Feedstuff Prices Lower by 75c Ton

WASHINGTON—Nationally speaking, feedstuff prices averaged 75¢ ton lower during the week ended Sept. 15, according to the U.S. Department of Agriculture's weekly Feed Market News. High protein feeds showed the most decline, but millfeeds and feeding molasses also weakened. Alfalfa meal, however, was independently stronger.

Oilseed meal markets averaged around $1.15 ton lower for soybean meal and $2 lower for cottonseed meal as ample supplies were offered freely in the face of little or no demand.

Meat proteins were unchanged to lower with average prices down about 55¢ ton on meat meal, 90¢ on tankage and $2 on fish meal. Offerings appeared ample for current demand, with buyers generally holding off while awaiting further price developments.

Wheat millfeed markets were mixed, with prices down at some points but unchanged or higher at others. Losses more than offset gains, however, and prices averaged about 55¢ ton lower on bran and a little weaker on shorts and middlings.

Alfalfa meal enjoyed a fairly steady demand and prices averaged about 50¢ ton higher, with most strength on the scarce supplies of sun-cured meal. Gluten feed and meal were down $2 ton at most markets and hominy feed weakened under pressure from increased offerings and less demand.

Feeding molasses prices weakened in slow trading at most markets.

Average Bulk Prices and Index of Weighted Prices*

(Dollars per ton)

	Sept. 15, 1959	Sept. 8, 1959	Change from previous week
OILSEED MEALS			
Prices at prin. mkts.:			
Soybean meal	61.00	62.15	—1.15
Cottonseed meal	57.60	59.65	—2.05
Linseed meal	74.00	74.00	...
Copra cake & meal	70.50	70.50	...
Peanut meal	55.50	54.50	+1.00
Index	79.8	81.4	—1.6
ANIMAL PROTEIN FEEDS			
Prices at prin. mkts.:			
Meat meal	77.45	78.00	— .55
Tankage	78.85	79.75	— .90
Fish meal	126.00	128.00	—2.00
Index	77.0	77.8	—0.8
GRAIN HIGH-PROTEIN FEEDS			
Prices at prin. mkts.:			
Gluten feed & meal	40.80	42.40	—1.60
Dist. dried grains	48.20	48.70	— .50
Brewers dried grains	38.50	38.40	+ .10
Index	65.1	67.0	—1.9
WHEAT MILLFEEDS			
Prices at prin. mkts.:			
Bran	34.05	34.60	— .55
Middlings & shorts	36.90	37.00	— .10
Index	64.2	64.7	—0.5
OTHER MILLFEEDS			
Prices at prin. mkts.:			
Hominy feed	39.15	39.40	— .25
Rice bran	31.00	31.00	...
Index	61.0	61.3	—0.3
ALFALFA MEAL			
Prices at prin. mkts.	48.35	47.85	+ .50
Index	93.1	92.1	+1.0
MOLASSES, FEEDING			
Prices at prin. mkts.	23.16	23.43	— .27
Index	68.9	69.7	—0.8
ALL FEEDSTUFFS			
Index	74.3	75.4	—1.1
FEED GRAINS			
Prices at prin. mkts.:			
Corn	42.20	42.70	— .50
Oats	44.00	44.10	— .10
Barley	42.00	41.90	+ .10
Grain sorghums	35.40	37.30	—1.90
Index	65.5	68.8	—3.3

*Base period of index is 1947-49.

GRAND OPENING

HENDERSON, MINN.—Bert Gehlen and John Sweeney of the Henderson (Minn.) Feed Mill held a grand opening recently.

RAISE FISHING WORMS ON THE SIDE

BLACKSBURG, VA.—Night crawlers are selling for more than eggs in southwest Virginia, according to a recent check on egg prices and fishing worms.

Poultry specialists at Virginia Polytechnic Institute are wondering if it might be well for poultry producers in the Old Dominion to raise fishing worms on the side, instead of putting all their eggs in one basket.

Western States Range, Cattle Condition Is Down from Last Year

LINCOLN, NEB. — The western states range and cattle condition Sept. 1 was about the same as the previous month, but two percentage points lower than the same period a year ago, according to a recent range and livestock report by the state-federal division of agricultural statistics, Lincoln.

The reported condition of range feed Sept. 1 at 79% compares with 79 last month, 81 last year and an average of 78%.

Moderate to heavy August rains covered most of Utah, Arizona, New Mexico and all but the central and northern plains of Colorado. This moisture freshened cured feed, started new growth of grasses and weeds, and replenished stock-water supplies over a wide area. The rains were particularly effective in Arizona and New Mexico, where the outlook for fall and winter grazing is now well above average.

Dry weather continued in the northern half of the west and in California and Nevada. Range grasses in this 10-state area are generally dry, brittle and unpalatable, with below normal vegetable growth. While it is too late for fall rains to produce any significant growth of new feed in the northern states, rain is still badly needed to soften dry feed, furnish stock water and build up soil moisture reserves. The dry grasses have put a hard finish on cattle and sheep, and shipping shrink is expected to be lower than for the past two years, according to the report.

Cattle Condition

The reported condition of cattle and calves Sept. 1 was 85%, compared with 85 last month, 87 last year and an average of 84%.

Reports from farmers and ranchers indicate that by Sept. 1, about a third of the expected total fall marketings of cattle and calves had already been sold or contracted for out of first hands. This is somewhat less than the number sold at this same time last year and, to a certain extent, reflects the "wait and see" attitude on the part of both buyers and sellers.

The condition of cattle showed little change during the past month, except for sharp gains in New Mexico and Arizona, due to improved range feed. Fall delivery weights are expected to be lighter than for the past two years in most of the northern areas, but will be relatively heavy in the southern plains where range feed conditions have been most favorable, according to the report.

USDA Announces October-December Soybean Prices

WASHINGTON—The selling price during the October-December, 1959, period for soybeans in the Commodity Credit Corporation inventory for domestic crushing or export will be the market price, but not less than 20¢ bu. above 1959 county price-support rates.

According to a recent announcement by the U.S. Department of Agriculture, this will apply to both 1958 and 1959-crop soybeans in the CCC inventory.

The pricing basis is designed to encourage the orderly movement of 1959-crop soybeans into commercial channels. The pricing basis for CCC-owned soybeans after Dec. 31 will be announced in advance of that date.

The county support rate for Grade No. 2 soybeans at the point of storage will be used in determining the minimum sales price in-store. The value of any transit billing will be added. Market discounts for quality factors also will apply.

USDA also announced that both 1957- and 1958-crop soybeans will be eligible for exchange under the barter program beginning Oct. 1. The pricing for barter exchanges during the October-December period will be the same as for other sales, except that delivery will be f.o.b. vessels, Great Lakes ports, and delivered at ports elsewhere.

The sales price will include an adjustment for transportation and other changes required to get the soybeans to the delivery point for barter exchanges.

The sales price for CCC-owned soybeans for the remainder of September will be the market price, but not less than the 1958 basic loan rate for No. 2 grade, basis point of production plus 11¢ bu., as announced in the CCC Monthly Sales List for September. As of Sept. 4, CCC had approximately 39.2 million bushels of soybeans in its inventory.

No soybeans will be sold from the CCC inventory between now and Oct. 1, 1960, at less than the price support level for the 1959 crop.

Announce Increase In Piperazine Price

NEW YORK — A price increase in piperazine hexahydrate was announced this week by Rhodia, Inc. In 100 lb. lots the new price is $1 lb.; 89¢ lb. for 200-900 lb. lots, and 86¢ lb. for 1,000 lb. lots or over. The change is effective immediately on spot sales; Oct. 1 on contract business.

ELEVATOR FIRE

LODI, WIS.—Fire spread by explosions of dust in a grain elevator and a pair of nearby oil tanks recently destroyed the Lodi Grain & Coal Co. elevator and the North Western Railway station nearby. Total damage was estimated at more than $100,000. L. A. Spilde, part owner of the elevator firm, said the loss included about $2,000 to $3,000 worth of grain and about a similar amount in feeds and other stock.

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USDA Notes August Chick Production Down 6% From a Year Ago

WASHINGTON — Commercial hatcheries produced 158,454,000 chicks during August, down 6% from August, 1958, but 36% above the 1953 57 average for the month, according to the U.S. Department of Agriculture August hatchery production report.

According to the report, the number of broiler-type chicks hatched was down 12%. Continuing previous trends, the number of egg-type chicks was down 12%.

The number of broiler-type chicks produced during August totaled 145,430,000, compared with 153,013,000 in August, 1958. For January through August the hatch of broiler-type chicks was up 3%.

Egg-type chicks hatched during August totaled 13,024,000, compared with 14,825 000 in August, 1958. Production January through August totaled 490,326,000, down 7% from the same period a year ago.

Smaller September hatches than a year ago also are in prospect. USDA noted that demand for both broiler and egg-type chicks is less than last year, reflecting low poultry and egg prices.

The number of broiler-type eggs in incubators on Sept. 1 was 9% less than a year earlier, and the number of eggs for egg-type chicks was also 9% less.

Iowa Farm Supply Distributes Unit for Farmers to Mix Feed

DES MOINES — The Iowa Farm Supply Co., through its 57-member service, is now distributing the electric Mix Mill in Iowa.

Made by the Belle City Engineering Co., Bluffton, Ind., the Mix Mill is designed to automatically measure, grind and mix four ingredients to produce a complete ration on the farm.

Iowa Farm Supply is making premixes for all types of livestock and poultry feeds to be used with the Mix Mill. The premixes are an addition to the company's present feed line which is being produced for Iowa Farm Supply by two commercial feed mills in Iowa.

The program calls for farmers to combine the premixes with their own grains and purchased plant protein on the farm.

Donald Landphair, a 1959 graduate of Iowa State University, Ames, has been added to the company's staff to work with farmers in the installation of Mix Mills.

Poultry Researcher Joins McMillen Firm

FORT WAYNE, IND. — The appointment of Dr. Donald F. Middendorf as poultry research specialist at the McMillen Feed Research Center, was announced recently by McMillen Feed Mills, Ft. Wayne. Dr. Middendorf primarily will be engaged in research on broilers.

Dr. D. F.Middendorf

He attended Iowa State University, where he received a B.S. degree in agricultural education in 1954.

From 1954 to 1956, he was in the Counter Intelligence Corps of the U. S. Army. Following army service, he began graduate study at the University of Maryland and received his Ph.D. degree in poultry nutrition in 1959.

CHEMELL

(Continued from page 1)

the three firms involved, were listed as in excess of $4 million, of which more than $635,000 is posted as owed other Chemell corporations.

Creditors Listed

Largest creditor on this list is Ralston Purina, with more than $880,000, followed by Master Mix, $297,000; Pillsbury Co., $239,000; General Mills, Inc., $168,000, and Allied Mills, $45,000, of the major feed companies involved. Two large incubator firms were listed with "amounts unknown." Chemell attorneys said the figures are subject to revision, since the statement had been hurriedly compiled for the meeting. It was stated that no attempt, so far, has been made to estimate or evaluate Chemell assets.

Mr. Chemell declared in sworn statements that he is "unfamiliar" the three listed in the petition for the moratorium under Chapter 11, Title 2, of the Bankruptcy Act.

Answering direct questions by attorneys for creditors, Mr. Chemell said he did not know the corporation was in any financial difficulty until the "manager" told him about it and that he (Mr. Chemell) didn't see any auditor's statement until sometime in July. He added he had not placed too much credence in the statement because "in my personal opinion this corporation has a great potential and if we can sell all the birds in this operation right now, we might be able to show as much as $50,000 profit before taxes."

Mr. Chemell also said that he had never heard of Chapter 11, under which he is seeking relief, until C. W. Milligan, a management consultant hired by Mr. Chemell, had told him about it "some time late in July."

Mr. Chemell admitted that, while he knew very little of the financial details of his far-flung operation, the petition was prepared and filed within a few days after talking to Mr. Milligan. It was filed on Aug. 2.

Further Testimony

He testified that he has no idea of the value of his personal assets which his attorneys say he has voluntarily pledged to support the claim the Chemell corporations are solvent with assets far in excess of liabilities. He said he drew no direct salary from the various corporations and that his annual stipend of $30,000 covered his efforts in behalf of all of them. He added that he couldn't remember how much income tax he paid last year. "The bookkeeper handled all those details," he said.

Questioned by attorneys regarding the financing of the laying hens through Chemell, Inc., Mr. Chemell said that Sherman Applebaum, former general manager, handled all the details and made the arrangements with Talcott, Inc., a New York investment firm. Mr. Chemell said that when Mr. Applebaum was hired, he was given full responsibility and authority to operate the firm. Mr. Chemell said his only knowledge of the activities of Chemell was gained from various reports submitted to him by employees.

He declared he was completely unacquainted with the financial transactions and that the corporation's bookkeeper, the late Dan Arnold, handled all details. Mr. Arnold died about two weeks ago.

Mr. Chemell said he owns 90% of the stock of Chemell, Inc., with Duke Perrone and Lloyd Jones, employees, each owning 5%, for which Mr. Chemell said they paid nothing.

Attorneys for Talcott, Inc., questioned both Mr. Chemell and Mr. Jones at length on the manner in which the layers were financed. Mr. Chemell claimed he "knew nothing about it and that Mr. Applebaum told him to let him (Applebaum) handle all the arrangements." Mr. Jones said in a sworn statement that he had never been "taken into confidence on just how the Talcott deal was handled."

MANAGER—Marion Balch, establisher of B. & B. Produce Co., San Angelo, Texas, has been named general manager of Paymaster Feed Mills' new San Angelo poultry and egg processing-marketing facility (see Sept. 12 Feedstuffs). Paymaster, a division of Anderson, Clayton & Co., Inc., Abilene and Dallas, Texas, recently purchased B. & B., an integrated broiler-fryer-egg operation in west Texas. The new facility will be known as Paymaster Feed Store.

Mr. Jones said that as far as he knew, Talcott advanced 80% of the 36¢ charge on each day-old pullet reported sold. He said these birds were sold to "dealers" for growing out to egg-laying maturity. When the birds were sold to producers, he said, the dealer received a commission of 7¢ per bird, plus the feed and medication cost, and 1¢ per bird per week for raising it. According to Mr. Jones, the balance was then turned over to Chemell, Inc., if Chemell, Inc., sold the birds. The dealer was then paid for growing them in the same manner, but without the commission.

Mr. Jones said Chemell, Inc., stood to show a profit when selling a day-old pullet for 36¢ and that mature birds had been sold for as high as $1.70. He estimated the average mature bird's cash value at around $1.35, and added that when Chemell salesmen were unable to sell the day-old pullets, they frequently set up dealers to grow them out, signing notes for the full amount of the cost.

These notes, as well as those on actual sales, were turned over to Talcott, with the limit being $500,800.

Mr. Jones said that when that figure was reached, Chemell, Inc., carried all the notes. According to him, the feed for these birds was furnished by Gainesville Hatchery, Inc., and charged to Chemell, Inc.

Statements Challenged

Talcott attorneys challenged these statements, declaring that few of the notes on some $450,000 handled under this plan have been paid, and that Talcott, Inc., is primarily interested in collecting money past due as well as that due when other notes mature. The attorneys claimed that Chemell, Inc., in taking a note for the full amount of the cost of the mature bird with the financial structure and detailed operation of some 20-odd corporations in which he is the majority stockholder and president. He stated that this was especially true of Chemell, Inc., the firm which was organized in March, 1958, to develop the commercial egg business and is one of on which was a 36¢ lien, actually sold Talcott property without the firm's consent and permission and had failed to secure a clear title to the birds.

Mr. Jones said that when notes were taken for mature birds, these notes were "substituted" for the original note on which Talcott financing had been secured.

Talcott attorneys said they are willing to negotiate with the creditors committee in developing a reorganization of Chemell, Inc., so that all creditors can be satisfied.

Prior to Mr. Chemell's testimony, attorneys for several banks, told Judge Mundy they are willing to accept debtors certificates in lieu of the liens they now hold on chickens so that the birds can be moved without court order. One attorney said his banker client is willing that Chemell continue operation under court approval and direction of the creditors committee, as that "seems the most likely way we can eliminate serious financial loss to all parties concerned."

The committee had submitted a plan, approved by the court, whereby the banks will receive a "Class A" certificate for $1 and a "Class B" certificate, also for $1, to cover their loans to Chemell on chicks. In the event the actual value of the loan is in excess of $1 per bird, the balance will be handled as an unsecured debt. The banks have agreed to this plan.

Board of Trustees

Judge Mundy also approved a recommendation that C. K. Groves, as president of the debtors-in-possession, name Mr. Chemell to a board of trustees under which the control of all Chemell stock will be placed on a voluntary basis. Three members representing the creditors will also be named trustees.

This trusteeship will be terminated when Chemell corporations have been reorganized and the creditors satisfied, or when Mr. Chemell involuntarily leaves the board. Under the latter condition, the trusteeship of the stock would revert to the court for further action.

This arrangement, according to an attorney of one of the major creditors, provided protection for both the interests of the creditors and the corporations involved and "also will prevent the ouster of Mr. Chemell from the organization by the creditors."

W. B. Spann, attorney for Paymaster Feed Mills, Abilene, Texas, took exception to the committee's action in placing the operation of all three corporations involved under Gainesville Hatchery, Inc. He declared such action "constitutes a fraud," since, in effect, he said, it transfers assets of two corporations to one without compensating or allowing for compensation to the creditors of the former. He said he will advise his client to institute bankruptcy procedures against two Chemell corporations—Chemell Poultry Farm, Inc., and Chemell's Hatchery of Texas, Inc., both located at Joaquin. He said about $55,000 was owed his client by the two firms.

Al O'Brien, chairman of the creditors committee, answered Mr. Spann by stating that "if any fraud has been perpetrated, it has been by Gainesville Hatchery, Inc., which has sold chickens at fixed prices below production costs to subsidiaries to the jeopardy of that corporation's creditors."

Another hearing is scheduled for Oct. 8 in federal court here when the committee and Chemell attorneys will attempt to work out the details of the proposed reorganization plan. It was pointed out that, by this time, the auditors, approved by the court, should have a report on the actual financial status of the corporations involved.

Judge Mundy said all Chemell personnel will be at this hearing or on call for questioning by attorneys, and the creditors committee, including Mr. Applebaum, who was not present when Mr. Chemell and Mr. Jones were testifying, but arrived near the close of the hearing.

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Delmarva Broiler Industry's Economic Struggle with Other Broiler Areas

EDITOR'S NOTE: The following article is the text of a release issued this week by the Delmarva Poultry Industry, Inc., Georgetown, Del., an association of processors, feed manufacturers, hatcherymen, growers and others. "Delmarva has no choice but to go all-out to keep its share of the market," the association says in concluding its report on such things as competition from the South, guarantees, costs and various self-help activities.

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Competition — that ever-present balance-wheel of America's free enterprise system—is currently forcing the Eastern Shore's multi-million dollar broiler industry into an extreme belt-tightening operation.

South Is Competitor—Delmarva's main adversaries in this gigantic chicken fight are the states of the South and other relatively new broiler-producing areas which have competitive advantages such as lower transportation rates on feed ingredients, lower labor costs, lower taxes and public utility rates, cheaper poultry housing costs and lower fuel bills for winter heating.

To meet this stiff competition, poultry industry leaders on the Shore are examining every step of the business from the time the hatching egg is produced until a city homemaker places chicken cacciatore on the family dinner table.

Chick costs, feed ingredient costs, production efficiency, transportation and marketing are some of the broad general areas under study. Of particular concern at the moment are grower contracts. In these, a feed company enters into agreement with a farmer to guarantee him a certain amount of money for each thousand broilers produced.

The feed company supplies the chicks, feed, floor litter, fuel to heat the broiler houses, veterinary care and management advice. The farmer supplies the buildings, electricity and his own labor to care for the birds during their nine to ten-week growing period.

The contract guarantees vary from company to company as do the various incentive plans used to encourage efficient production and high quality birds. Until the recent economy drive, contracts such as the following were offered by many companies:

(1) $50 to $60 per thousand birds plus half of the profits.

(2) $75 per thousand birds; no share of profits.

Lower Guarantees — Many companies have since adjusted their contracts downward — some reporting levels of $40 per thousand birds plus certain bonus incentives — usually based on production efficiency. Some companies are still maintaining their contract guarantees at higher levels, but representatives of several of these groups say they are feeling the pinch and that downward adjustments may have to be made.

Although the level of the contract guarantee is strictly a business agreement between a feed company and an individual farmer, many companies have been reluctant to lower their guarantees. The reason is that many of the farmers who are now contracting were, only a few years ago, cash customers of the feed companies. As one dealer put it, "It's pretty hard to suddenly put the squeeze on a farmer who's been your loyal customer and friend through the years."

Cut Back Is Hara-Kiri—But the manager of one large integrated firm believes the industry has to choose between lower contract guarantees or a cut-back in production, meaning fewer farmers on contract. He emphasized, however, that if the Eastern Shore cuts production, the area may never again regain its lost markets. He believes that other areas would immediately step in and fill the gap. Thus, in this man's opinion, cutting volume is something akin to industry-wide hara-kiri.

Another point cited is that the South, as a newcomer in broiler production through observation of production techniques in other areas, was able to eliminate some of the factors that cost Eastern Shore growers more money. Contracts are offered on a "take it or leave it" basis in the South, and sentiment is not the factor it tends to be here. Farmers in the South also supply their own litter, while this production expense is borne by the feed company on the Eastern Shore.

Some farmers in the South get a flat allowance for fuel for the winter, and any fuel required above this allowance must be paid for by the farmer. On the Shore, the prevailing practice is for the feed company to supply whatever amount of fuel is required. Under this system, some companies report a fuel cost difference among farmers of as much as 1¢ per pound of broiler produced.

Present costs of litter and fuel are of concern to some contractors. They believe that suppliers of these production items should recognize the present competitive situation the broiler industry finds itself in—and adjust their prices. As one feed man put it, "If we don't get some relief on fuel costs, I'll have to get into the oil business."

In many cases, the guarantees paid growers in the South amount to the equivalent of only $20 to $30 per thousand birds when compared to Delmarva contract rates. This presents Delmarva contractors and processors with a considerable competitive obstacle to overcome.

Other Measures—While lower guarantees may provide some relief from current economic pressure, additional measures will have to be taken if the Eastern Shore is to meet and beat the increasing competition from the South and other major broiler areas. This is indicated in a recent study by a field survey team of University of Delaware and University of Maryland staff members.

The study pointed to a half-dozen changes the broiler industry on the Shore would have to make in order to stay in business. Among these were the need to reduce feed transportation and ingredient costs, cut chick costs, make fuller use of processing plant facilities, achieve greater management efficiency in broiler houses and capitalize on the major competitive advantage Delmarva enjoys—nearness to market.

Work Started—Steps are already being taken to implement these needed changes. Both universities, for example, are currently working on processes that may make it possible to incorporate locally-grown soybeans into feed rations. This would greatly reduce transportation costs of soybean oil meal presently "imported" from the Midwest.

Committees appointed by Delmarva Poultry Industry, Inc., the Shore's industry-wide association of processors, feed manufacturers, hatcherymen, growers and other related branches of the broiler industry, are expected soon to tackle special studies of lower transportation costs, additional grain storage, more efficient poultry processing, marketing, broiler production and hatchery costs.

Self-Help — All of these self-help activities on the part of the broiler industry are being undertaken in an atmosphere of earnestness and seriousness of purpose. Competition is forcing the industry to make a fundamental decision—whether to capitulate to other broiler areas in the struggle for markets—or to sharpen the tools of business and join the fray. Many well-qualified observers believe that Delmarva can more than hold its own in a rough and tumble broiler market free-for-all.

Delmarva poultrymen expect this present broiler market free-for-all to continue for a while, though. They feel that too-heavy increases in production in the southern broiler area have brought on the present period of extremely low prices for the whole industry. Also, that the South shows little sign yet of slowing down on these yearly increases in production.

As proof, they point to the U.S. Department of Agriculture figures on production increases in major broiler areas from 1953 to 1958. During that period, Delmarva upped its production only about 38%. That was just about sufficient to take care of the population increase and the increased amount of chicken eaten per person in its traditional share of the national market.

But Georgia upped its production 140% in that period. North Carolina was up 165%; Alabama, a whopping 363%; Mississippi, 139%, and Tennessee, 165%.

Last year, Delmarva upped its production only 7% over the year before. But Alabama and North Carolina both raised production 26% while Arkansas boosted its figure 21%.

So far this year, Delmarva is only producing at a rate of about 4% more chickens than last year. But Georgia, North Carolina, Alabama and Mississippi are up anywhere from 10 to 36%.

Faced by this kind of a production picture, Delmarva has no choice but to go all-out to keep its share of the market. Success in this struggle is also of vital importance to many thousands of Eastern Shore people because the broiler industry here is a $200-million-a-year business — the largest single agricultural industry on the Peninsula.

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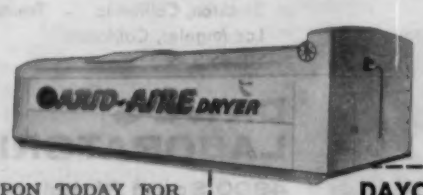

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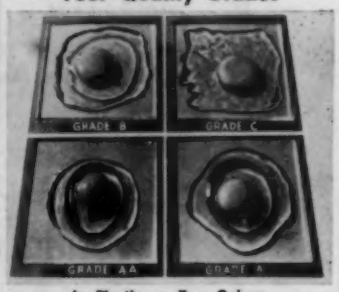

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Combination of Antibiotics Discussed By Control Officials

DES MOINES—A recent feed regulatory news bulletin from I. Levin, Iowa state chemist, included comments on the practice of using antibiotic combinations in feeds.

Various aspects of the situation are discussed, and then Mr. Levin notes that "there would be no objection by the Food and Drug Administration to use of combinations of antibiotics under certain specified conditions."

Following is the Iowa bulletin item on this subject:

"At the outset we must remind Iowa registrants that the FDA is strongly opposed to guarantees for antibiotics which are not in the therapeutic range and are not indicated for therapeutic purposes. Growth stimulation and increased feed efficiency are not therapeutic claims in all instances for antibiotics. However, our procedures in the past have permitted guarantees for non-therapeutic amounts of antibiotics under the guaranteed analysis heading.

"Since our Iowa station has been recommending combinations of four antibiotics, we contacted Dr. Laverne C. Harold of the FDA staff with regard to this practice. From our discussion it is our understanding that combinations of antibiotics are permitted under the regulations if their combined level is under 50 grams per ton (or the growth promotant level), and they are indicated on the label in the list of ingredients as antibiotic feed supplement.

"As I read antibiotic regulations (146.26) they already provide for the control of enteritis in mink (subdivision 14) using chlortetracycline, bacitracin and penicillin at certain levels and with or without oxytetracycline. Also provided for are combinations (a) chlortetracycline and oxytetracycline (b) penicillin and bacitracin (c) penicillin and streptomycin. These are for the treatment and prevention of certain diseases of swine and poultry. Subdivisions (16) and (17) of these regulations apparently permit a combination of chlortetracycline, oxytetracycline and bacitracin at certain levels for the prevention and treatment of certain poultry diseases.

"I also understand from Dr. Harold that there would be no objection by the FDA to the use of combinations of antibiotics under the following conditions:

."1. A combination of oxytetracycline and chlortetracycline at the proper level for the prevention or treatment of certain diseases with added penicillin and bacitracin. Penicillin and bacitracin may be added either singly or in combination in levels under 50 grams per ton. Or penicillin and streptomycin may be added under 45 grams per ton. However, neither the penicillin and bacitracin nor penicillin and streptomycin may be guaranteed. They must appear on the label as antibiotic feed supplement in the list of ingredients.

"2. Combinations of either (1) streptomycin and penicillin or (2) bacitracin and penicillin at permitted levels to prevent or treat certain diseases with added oxytetracycline and chlortetracycline. Chlortetracycline and oxytetracycline may be added either singly or in combination at levels less than 50 grams per ton. However, neither the oxytetracycline nor the chlortetracycline may be guaranteed. They must appear on the label in the list of ingredients as antibiotic feed supplement."

Pelleted Lamb Feed Increasing in Texas

LAMESA, TEXAS—Pelleting of feed for lambs has increased steadily in the west Texas sheep country, according to John Clark, owner of the John Clark Feed Co.

One popular mixture for pellets is alfalfa hay and grain, Mr. Clark says. Mr. Clark is now servicing several flocks in this area, and says there is a growing trend for some farmers to feed lambs instead of cattle. The first cost is much less, and the returns are quicker, he says.

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*U. S. Dept. of Agriculture Marketing Research Report No. 205

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USDA Report Analyzes Mobile Milling Operations, Costs, Returns

WASHINGTON — An analysis of operations, costs and returns on mobile feed milling is offered in a recently issued U.S. Department of Agriculture report.

The report, "Mobile Feed Milling by Cooperatives in Michigan and Wisconsin," was prepared by Arno J. Hangas of USDA's Farmer Cooperative Service.

The report covers a case study of mobile feed milling operations of 11 cooperatives operating 15 mills in Michigan and Wisconsin in their 1957-58 operating year.

The main objectives, said Mr. Hangas, were (1) to find the policies and practices used and the problems involved in their operation, and (2) to obtain income, expense and other operating information that may be of use to others operating or planning to operate similar units.

"The first portable feed mills," said Mr. Hangas, "were developed about 10 years ago. The mills have gradually been improved and now do a good job of grinding, mixing and molasses blending. At least a dozen manufacturers are presently making them. With proper concentrates and the farmer's grain, feeds as good as those mixed in stationary custom mills can be mixed on the farm. This fact was brought out by information obtained from nine cooperatives operating both stationary and mobile mills that were included in the survey.

"Mobile milling is a way of extending the operating territory of a retail feed store or a custom mill. But some cooperatives and other businesses have had difficulty making their mobile mills pay. Some have even been forced to discontinue their use. It is expected that the information provided by the FCS survey will help cooperatives and others who operate or contemplate operating these mills to evaluate and improve their businesses and thus provide more efficient service to farmers."

Following is the summary of the USDA report:

General Description and Comparison with Stationary Service

1. Each of the 11 associations had operated a mobile mill for 3 to 6 years. Most of them had one mill each but the group did include two 2-mill and one 3-mill operations.

2. Most of the units were the first in their area. They were established because managements of the cooperatives believed that they would either increase feed volume, provide service in outlying areas, or help them get into the feed business.

3. Convenience and saving in time and physical effort were the main reasons given by managers for farmers' use of mobile milling service. They stated that such a service was best adapted for the larger dairy farmer and the more distant patron.

4. Mobile milling is a way of extending the operating territory of a retail feed store or a custom mill. On an average, locations of mobile mill patrons were farther from the mill or office than the patrons of the stationary mill in all nine assocations which operated both types of mills.

5. On the whole, the grinding and mixing done by the mobile units was considered fully equivalent to that in the stationary mills of the nine associations that operated both types of mills.

Volume and Type of Service

1. The 11 associations serviced a total of 1,020 patrons with a total of 42,689 tons of grinding and mixing, or 2,846 tons a mill during their 1957-58 year. Most of the associations operated within a 20-mile radius, and 80 percent of the feed mixed was dairy feed.

2. Of the materials ground and mixed 84.6% were home-grown items and 15.4% were purchased ingredients. Fifty-eight percent of the home-grown materials was corn; 31%, oats; 7.5%, hay; and 3.5% was miscellaneous materials. Purchased items consisted of molasses, concentrates, and straight ingredients.

Operating Practices

1. Nine of the associations delivered ingredients separately on regular routes. In one assocation the ingredients were delivered with a concentrate truck which accompanied the mill, and in another case 90 percent of the ingredients were delivered by the mobile unit. Seven of the associations made no charge for delivery. Two charged $2 a ton and two charged $3 a ton.

2. Three fourths or more of the patrons in all the associations and all the patrons in five associations were serviced on regular routes, either weekly or at two-week intervals. Special orders in most cases were serviced off the regular routes.

3. In some associations most of the feed was "bagged off" while in others most of it was unloaded in bulk. On the average, 55% was unloaded in bulk.

4. Most mobile mill operators did relatively little nutritional or sales work. In most cases this phase of the work was handled from the office.

5. Time required in mixing a batch averaged 33 minutes, and batches averaged 2,327 lb. In all associations a wide variation existed in the time required per batch on different farms. The main reasons were: (1) Number of times the mill had to be moved, (2) number of operators used, (3) method of unloading, whether sacked or bulk, (4) type of material ground, and especially the moisture content of the grains ground, and (5) amount of help received from the patron in the one-man operated mills.

6. The associations reported a wide range in the number of times the mill

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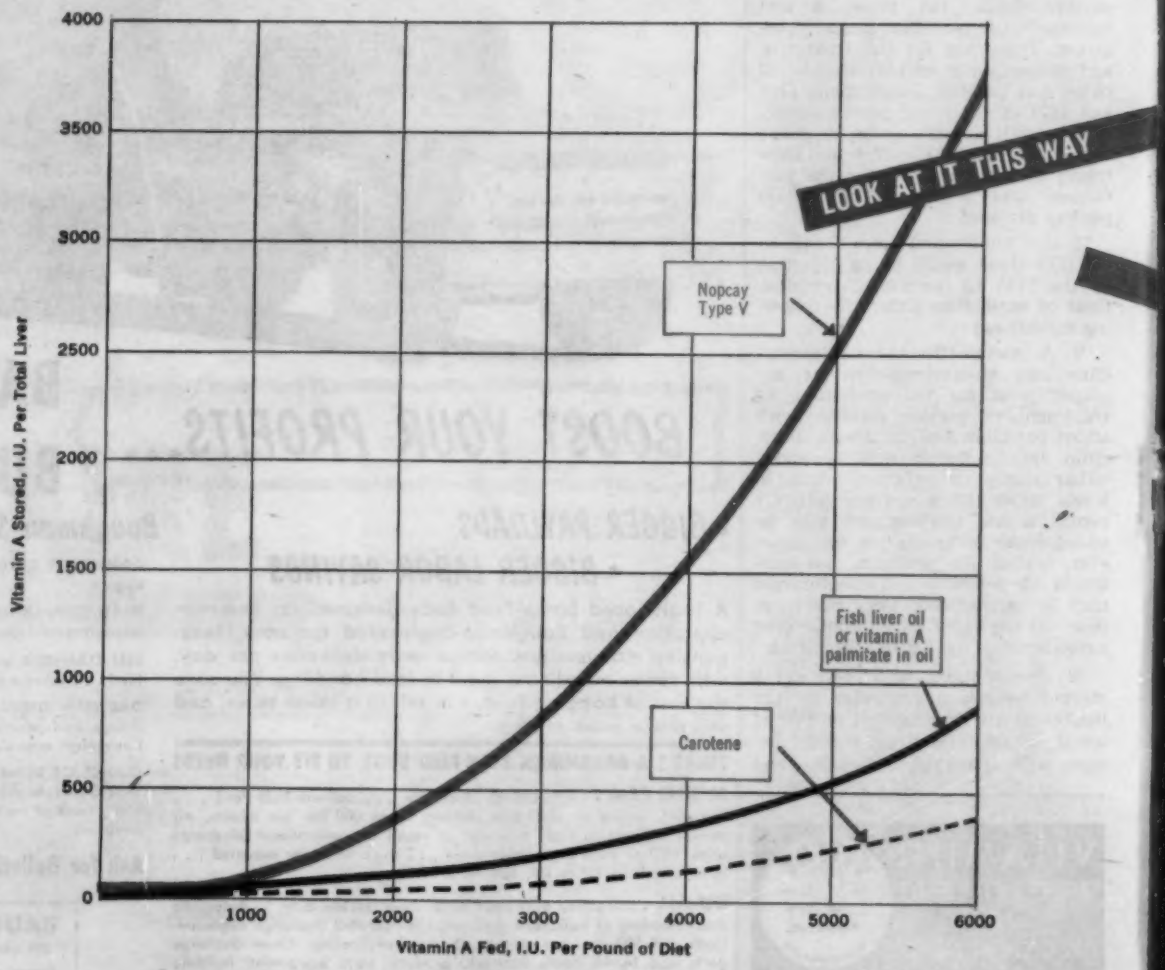

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had to be moved on different farms. The difference was due to the number of locations at which materials had to be picked up in processing a batch. Some managers had been able to reduce the moving required by training patrons to get the materials ready at one spot. Others could have improved their operating efficiency by training more patrons to make such arrangements.

Service Charges and Compensation Plans

1. Grinding and mixing charges ranged from $3.60 to $4.75 a batch or from $3.36 to $4.50 a ton. Some associations made an additional charge for fine grinding, sacked unloading, or if the patron did not help. Others gave discounts on the grinding and mixing fees for supplements purchased. Minimum charges for a stop ranged from $1.50 to $4.50. The credit policy in all cases was the same for both the mobile mill and other feed customers. On the average, 72 percent of the mobile mill business was done on credit.

2. The 11 associations used a variety of pay plans for compensating operators and helpers. Three paid a straight wage or salary, three paid straight commissions, and five used a combination of base pay and commissions. The method of compensation was considered less of a factor in the success of the operation than the inherent ability of the operator.

Factors Affecting Operations

1. Ability of the operator was important in the widely differing operating results among the associations. In fact managers listed the selection of a good operator as the number one problem in a mobile milling operation.

2. Managers and operators were generally satisfied with the type of equipment they had. The major mechanical problem was the power plant. Several had been replaced and most had required considerable repair and overhaul.

3. Volume of grinding and mixing varied considerably from the busy winter months to the slow summer months. On the average the volume in the smallest week was only 58 percent of the high-week tonnage. Operators and helpers were in most cases transferred to work in the warehouse during the slack periods.

Costs and Returns

1. The grinding and mixing revenue alone failed to cover operating expenses in any of the operations. At the charges used, income from molasses or ingredient sales was needed to meet expenses—even in the better managed operations. Grinding and mixing revenue averaged $3.73 a ton. Molasses sales brought in an average gross margin of $1.20, making a total operating margin for grinding, mixing, and molasses sales of $4.93 a ton of feed mixed. Operating expenses averaged $5.15 a ton, thus exceeding the service and molasses margin by 22 cents a ton.

2. A mill operating at the average costs and returns of this group would need an annual volume of about 3,190 tons to break even with the molasses income added to the service (grinding and mixing) revenue; or about 2,280 tons to break even if both the molasses and ingredient margin were added to the service revenue.

3. Six associations operated with two men and five with one man per mill. Volume averaged 3,208 tons in the two-man and 2,122 in the one-man mills. The one-man mills had lower labor costs but higher total costs than the two-man mills. The latter made better use of their fixed investment because of the larger volume per mill.

4. Operation of a mobile milling service on a paying basis with the fees that these associations used requires aggressive promotion of the service and a real program of feed merchandising. Since part of the margin must come from molasses and feed sales of concentrates and ingredients, customers must be sold on the benefits of a complete mixing program rather than merely the grinding and mixing service.

Management recommendations and suggestions as to advisability of cooperatives providing mobile milling service have not been included in this initial report because of the limited area and small number of mills studied. They have been deferred until studies of other mills in other areas provide a broader basis for developing such recommendations and suggestions.

COMPLETE REPORT AVAILABLE

The complete report on the mobile milling survey described in the accompanying article is available from the U.S. Department of Agriculture. USDA said that anyone needing additional information on the study may request a copy of FCS General Report 63, Mobile Feed Milling by Cooperatives in Michigan and Wisconsin, from the Information Division, Farmer Cooperative Service, U.S. Department of Agriculture, Washington 25, D.C.

Joins Abbott Labs Nutrition Department

NORTH CHICAGO, ILL.—Dr. Irvin D. Smith has joined the nutrition research department at Abbott Laboratories.

Dr. Smith has a master's degree from the University of Illinois and recently completed his Ph.D. at the University of Wisconsin under Dr. Paul Phillips.

He majored in animal husbandry and biochemistry.

APPOINTMENT

GAINESVILLE, GA.—Reginald V. (Vic) Barber has been appointed sales representative for Dixie Chick Co. here, according to Henry Waters, owner. Mr. Barber, a native of Mobile, Ala., will handle the sale of Ghostley chickens in Georgia for Dixie.

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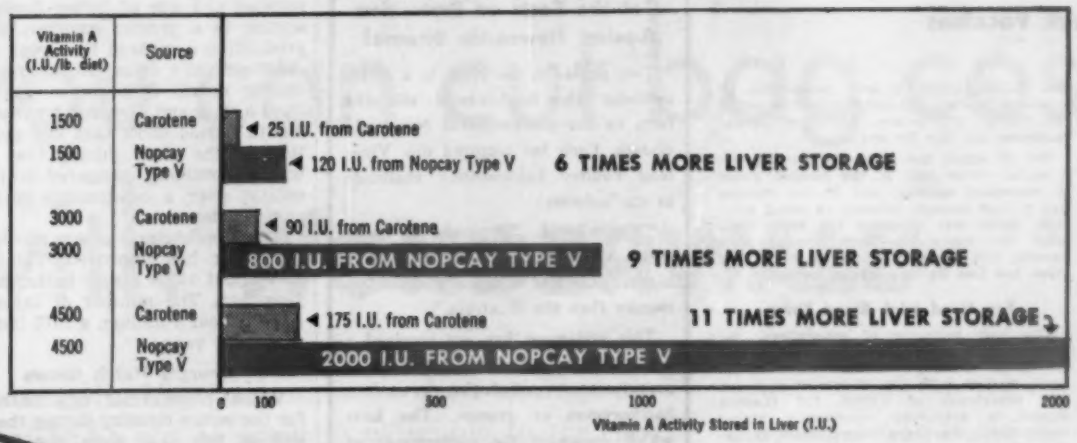

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Vitamin A Source	Desired Liver Storage Level, (I.U./total liver)	Level Required in Feed (I.U./lb.)	Ratio of Biological Effectiveness of Vitamin A Compared to Carotene	
			Individual Readings	Average
Natural Carotene (alfalfa meal and cornmeal)	250	5000	1.0*	1.0*
	500	6400	1.0*	
	1000	7600	1.0*	
Fish Liver Oil or Vitamin A Palmitate in Oil	250	3600	1.4	1.3
	500	4800	1.3	
	1000	6100	1.2	
Nopcay Type V	250	1900	2.6	2.6
	500	2400	2.7	
	1000	3200	2.4	

*Carotene used as a standard and assigned a value of 1.0

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South Gaining Recognition as Strong Region in Commercial Egg Production

By Special Correspondent

MACON, GA.—The South is well on the way to becoming one of the nation's leading egg producing areas. And, apparently, the region has no intention of halting this growth.

Georgia, already, is an egg exporting state. Alabama is expected to join Georgia in this respect by 1960. Mississippi's laying flocks are increasing in size and number. In North Carolina, too, there have been indications that egg production is on the upswing.

This southern expansion of egg production has cut into the markets of eastern and midwestern poultrymen—and it has had a great deal to do with lowered egg prices this year. The effect has been felt to the extent that eastern egg producers asked the government to do something about the situation and mentioned the possibility of price supports in an effort to eventually bring production restrictions.

Recently a New York state poultryman put his finger on the reason why the South has become a tough competitor in the egg business over the past few years.

"Southern farmers, faced with tighter acreage controls on cotton, peanuts and tobacco have turned to giant broiler and egg operations," he declared. "The South has lower labor costs. Its warmer climate cuts fuel and housing costs. Transportation rates are lower from the Midwest."

S. L. Davis, poultry marketing specialist, Alabama Polytechnic Institute at Auburn, said he agrees with this statement, but added that the Southerner's ability to master management techniques in short order has also been a big factor.

He cited the increase in the average rate of lay in Alabama. It was 181 in 1957, 186 in 1958 and very likely will be 190 this year. He predicted the rate of lay in the South will exceed the national average of 202 within a few years.

Integration Trend

Harold Liebman, president, Central Connecticut Cooperative, called for egg producers in that area to "join forces to cut costs in marketing and purchasing." Mr. Liebman, an independent producer, declared that "cyclical ups and downs of the egg industry have been complicated by a new factor—a trend toward big and efficient integrated units, particularly in the South.

"Our survival as independents depends on the answer to one question: Can we produce a dozen eggs at a lower cost than the integrators?" he said at an egg producers' meeting held at the University of Connecticut.

Mr. Liebman said that since New England does not produce enough of its own eggs, "big producers are a threat to smaller producers who do not have enough volume and influence in the market place to stay in business."

He called on Connecticut growers to revitalize their farm organizations and participate in their activities so their policies will reflect the point of view and the needs of individual farmer members.

"To survive, independent egg producers must pool their purchasing power to buy feed, chicks and supplies," he said. "They must also pool the product they sell through cooperative marketing associations or through some group which will bargain in behalf of egg producers."

Mr. Davis said Alabama will join Georgia as an egg exporting state and pointed out that, as recently as two years ago, Alabama was producing only 60% of the eggs consumed in that state, while that figure has since grown to 75%.

"It won't be long before the home market is taken care of and Alabama egg producers will be seeking additional markets," he said.

Mr. Davis said egg producers everywhere recently experienced the lowest egg prices in 18 years—primarily because of more hens on farms, a higher rate of lay and declining per capita egg consumption. He added that the egg industry is going through the low part of the regular two-year cycle of high and low egg prices. He said producers can expect a continued narrow margin, but not losses.

"Despite low prices," Mr. Davis continued, "Alabama and other southern states are expanding production. Midwest and northeast areas—which can't stand low prices—are reducing operations."

The Crop Reporting Service has pointed to Mississippi's increasing number and size of laying flocks, resulting in a greater commercial egg production compared to a year ago.

Mississippi's farm flocks are producing nearly 30% more eggs now than a year ago. Records for a seven-month period show that egg production in the state during that time was 430 million, compared with 375 million over a comparable period a year earlier.

The monthly rate of egg production per layer has improved. This rate, now about 16, is 2 eggs better than a year ago. The number of layers on hand is near 4 million, a 12% increase over last year.

Georgia Hatch Grows

While commercial egg hatchings for the entire country during the first half of this year were just 94% of the 1958 rate for the same months, Georgia's hatch showed an advance of 84%.

Egg prices have been higher than the national average in Georgia. For instance, at one point Georgia eggs were going for 37.2¢ doz., while the national average was 24.9¢ doz.

Recent data shows that egg production in the south Atlantic area was 12% greater than a year earlier, with Georgia's increase at 18%, compared with a 2% increase nationally in commercial egg production.

In Granville County, North Carolina, there has been a 60% increase in commercial egg production during the past year, according to C. V. Morgan, agricultural agent.

He said an egg route started in Granville County a year ago has hit an all-time high of 185 cases a week, and he expects additional marketings when several farmers on the route bring their pullets into production.

Hatchery to Build

DOUGLAS, GA. — Construction of new facilities is being planned by South Georgia Hatchery, Douglas, owned and operated by Owens Bros., Dahlonega, Ga. The hatchery has been out of operation since late last year when its facilities were destroyed by a fire.

The new facilities will include incubators with a capacity for 400,000 eggs.

(Advertisement)

THE INSIDE STORY ON . . .

Why Newcastle Disease Losses Are Still Hurting the Industry

Thousands of Broilers Die Needlessly From Vaccination 'Breaks' With Weak Vaccines

DESPITE the fact that vaccination against Newcastle Disease has become a standard part of virtually every poultry operation in the country—and has been for several years—this disease still remains one of the greatest causes of morbidity and mortality with which the industry has to deal. Puzzled poultrymen find it difficult to understand why their flocks begin to suffer outbreaks from Newcastle Disease especially when they have vaccinated faithfully in accordance with directions.

Most of them realize that the mass vaccination of birds is not as uniformly effective as when birds are individually treated. But even allowing for whatever shortcomings may exist with the mass method of vaccination, they find it difficult to understand how a high proportion of a flock can come down with a virulent form of Newcastle Disease. They are justified in asking blunt questions—and deserve something more than glib answers.

The confusion stems from the "hidden humbug" that surrounds vaccines. These little known facts about vaccines and vaccinating are working an annual economic hardship on the poultry industry that is impossible to calculate. The tragic aspect of the situation is that, barring human error and negligence, these flock losses need not have occurred.

Here are the facts that will help you halt the ever-present threat of Newcastle Disease to your flocks.

Water Vaccination Best Mass Vaccination Method

There is a wealth of scientific and practical evidence that the drinking water system of vaccination is the best of the mass methods. It is a tremendous labor saver. Furthermore, it is not possible to overdose with the drinking water method.

This last does not hold true with the dust or spray methods of mass vaccination. With water vaccination, the protective infection is set up in the upper respiratory tract. With sprays and dusts, infection is produced in both the upper and lower tracts. Over-dosage can occur when vaccines are inhaled deep into the lower respiratory tract and lungs, and possibly into the air sacs. The result can be vaccination mortality, especially if the birds treated are of a young age.

Important Differences in Vaccines

Although water vaccination has been established as the best mass method of treatment, "breaks" sometimes occur.

These "breaks" are almost invariably linked with attempts to combine the excellent water method of vaccination with underpowered vaccines.

Two strains of virus are used in the manufacture of commercial Newcastle vaccines—the B¹ strain and the LaSota strain. The LaSota strain is used exclusively by Vineland Poultry Laboratories and is called the VIPOL 717 strain. All other manufacturers use the B¹ strain.

The B¹ strain can immunize through the drinking water **only if the treated water is consumed quickly** and if the vaccine has a high enough potency to stand dilution. Birds not drinking for some time after the water has been treated with vaccine will consume water in which **the virus has lost its immunizing power.**

You Need High Blood Titres

The best indicator of generalized immunity, high blood titres produced within the birds, cannot be demonstrated in all birds treated with the B¹ strain of virus. The superiority of VIPOL 717 (LaSota strain) in producing consistently higher blood titres has been documented by research in one of our leading state universities.*

The initial test showed an HI titre for the LaSota strain (VIPOL 717) five times greater than for the B¹ strain. A second trial verified the 5-to-1 superiority in titre rating.

Only one mild strain of Newcastle vaccine consistently produces the high blood titres and durable immunity necessary to fully protect flocks right up to market age. That strain is VIPOL 717 (LaSota strain), manufactured exclusively by Vineland Poultry Laboratories.

Retains Power to Immunize

VIPOL 717 vaccine (LaSota strain) retains its power to immunize for periods as long as **24 hours and more** after it has been added to the drinking water. Because of the original high titre of the virus in the vaccine itself, it can stand dilutions in the drinking water even far beyond recommended levels.

VIPOL 717 (LaSota strain) Newcastle vaccine has an unlimited infecting potential that continues through the vaccination reaction period and insures the immunity of a maximum number of susceptible birds. In other words, this upper respiratory tract vaccination "take" with VIPOL 717 is conducive to a natural passage between birds that backs up the drinking water action.

Need for Revaccination at Minimum

Revaccinations on young chicks with VIPOL 717 are reduced to a minimum. They are necessary **only** if the birds are carrying parental immunity at the time of the first vaccination.

On the other hand, revaccinations with the B¹ strain are necessary, simply because this strain of virus lacks infecting potential among those susceptible birds that do not receive a dose of vaccine at the time of vaccination.

Get the Facts on Protection Against Newcastle Disease!

This article is the sixth in a series outlining the fundamental scientific facts on the prevention of Newcastle disease. Each has featured this Vineland Poultry Laboratories' challenge to the industry:

"The VIPOL 717 strain of Newcastle disease vaccine produces a higher titre and a more durable immunity than the B¹ strain."

This statement has not received a single contradiction from any vaccine manufacturer, pathologist, breeder, hatcheryman or grower. The facts which document the performance of VIPOL 717, implicit in this statement, have been featured in each of our national ads. Not one single point in these articles has ever been challenged.

Newcastle disease is still a threat. It takes vigilance and protection in depth—the protection of VIPOL 717 Newcastle disease vaccine—to keep your flocks safe from the ravages of this disease.

VIPOL 717 Newcastle Disease Vaccine can be used for revaccination on flocks previously vaccinated with the B¹ Strain. One of the nation's foremost state colleges specifically recommends this procedure, advising all poultrymen in their state to use VIPOL 717 Newcastle Disease Vaccine in the water as the last vaccination at housing time regardless of any previous vaccinations.

Remember that the LaSota Strain is used exclusively by Vineland Poultry Laboratories. This means that only VIPOL 717 provides the full measure of protection conferred by this powerful, yet mild, strain of virus.

See your nearest dealer or Vineland State distributor, or contact Vineland Poultry Laboratories, Vineland, N. J., or 4068 Broadway Place, Los Angeles 37, Calif., for VIPOL 717 or for more detailed information.

*The name of the scientific publication and the date of issue in which the report on these experiments appeared will be supplied upon request.

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For example, 19 feed companies show average savings of $5.85 per M bags by switching to the new, tougher WONDERWALL from their natural kraft bags.

Typical are the savings of one firm that had used a 17" x 4" x 32½" four-ply, sewn, open mouth bag of 250# total basis weight for a feed ingredient. When they changed to a three-ply WONDERWALL of 210# total basis weight, they saved 40# in paper basis weight and cut their cost by $7.15 per M bags.

The comparable bag constructions were:

Old Natural Kraft Multiwall
1/50, 1/90 AL, 1/50, 1/60 rough finish — 250# Total Basis Weight

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Clupak, Inc.'s trademark for extensible paper, manufactured under its authority.

West Virginia Pulp and Paper

Feeding Research Reported At Illinois Cattle Event

By Special Correspondent

URBANA, ILL.—Persons attending the annual University of Illinois Cattle Feeders Day Sept. 4 were presented with reports on several recent feeding trials.

Among the reports presented by animal science researchers were these:

● A pelleted all-hay or a 15% concentrate-85% hay ration produced satisfactory liveweight gains on calves, yearlings and two-year-olds. However, these were not fattening rations. A change to a 60-40 or 80-20 ratio would seem warranted in the last half of the feeding period if slaughter finish is desired.

● Steers fed six times daily, at four-hour intervals, gained faster and more efficiently than self-fed steers or steers fed twice daily.

● Equal weights of third cutting alfalfa and high-moisture corn, ensiled together, made an "excellent all-in-one fattening ration" for beef steers.

● High-moisture corn stored in conventional silos equaled the feeding value of No. 2 corn.

● Tapazole in fattening steer rations produced an immediate and dramatic gain response; during the remainder of the test, these steers were outgained by the controls. In this test with fermented corn, the enzyme Agrozyme had no effect on gains or feed conversion, whether fed singly or in combination with Tapazole.

● Gains of wintering beef calves fed a ration of corn silage and soybean meal were significantly increased when Aureomycin was fed.

● Effects of various levels of stilbestrol implants in double implantations were reported.

● Implants of Synovex-H in beef heifers increased average daily gain by 11.6%; because of great variability in rates of gain, the difference was not considered statistically significant.

PELLETED RATIONS—The report on complete pelleted rations was given by R. J. Webb, superintendent of the university's Dixon Springs Experiment Station.

This test was planned to further study the effects of wide variations in concentrate-roughage ratios in complete pelleted rations self-fed to calves, yearlings and two-year-old steers. The calves were on test for 165 days, while the yearlings and two-year-olds were fed 132 days. Salt and a simple mineral mixture were fed free choice. The concentrates in the complete pelleted rations with hay were ground shelled corn and soybean meal.

Previous tests had shown that steer calves self-fed on all-hay pellets can make satisfactory gains. Results of the most recent tests showed that the calves, yearlings and two-year-olds made satisfactory gains on all-hay pellets. Average daily gains were 1.74, 1.71 and 1.64 lb. per head daily for the calves, yearlings and two-year-olds, respectively. Cattle receiving a ration of 15% concentrate and 85% hay also made satisfactory gains. However, these two rations did not produce acceptable finish on the cattle. Therefore, they should be con-

(Turn to RESEARCH, page 104)

WAFERS—Dr. A. L. Neumann, head of the University of Illinois beef cattle division, displays samples of hay wafers at the recent Illinois Cattle Feeders Day. One of the research reports compared complete pelleted rations of varying concentrate-roughage ratios.

FREQUENCY OF FEEDING — Robert Mohrman, Illinois graduate assistant in animal science, demonstrates an automatic feeder used in a recent feeding trial. Results of the trial showed that cattle fed six times daily consumed more feed, made faster gains and utilized their feed slightly more efficiently than self-fed cattle or cattle fed twice daily.

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No. 570—newest design... plastic coated floors... eggs "roll-a-way" immediately, cool quickly.

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Hi-Lo Hanging Feeders. Two most popular sizes. Perfect pan—every crumb is eaten. No. R-40: Cap. 40 lbs. No. R-35: Cap. 35 lbs.

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Fauser's Purina Service Center grew from a small beginning in less than 11 years.

"We grow by serving the farm community"

—says Ernest A. Fauser, Fauser's Feed and Supply, Waterloo, Iowa

"This business offers the opportunity of serving the farm community as well as earning a living," says Mr. Fauser, who owns the Purina Service Center at the north edge of Waterloo. "You have to serve to make a business grow."

From the day, 11 years ago, when Mr. Fauser bought a seed store that "sold a little feed," his organization has been dedicated to service. The policy has paid well, for his volume today is four times what it was then. And his business has outgrown the original 20-by-40-foot building and now is in its modern superservice center.

"The Purina Franchise is the best a man can have," says Mr. Fauser. "Purina has backed our efforts with real sales help, with national advertising and with programs that help us help farmers."

Farmer S. H. Schaumburg (right) has his home-grown grain Check-R-Mixed at Fauser's for his hogs and dairy cows. Millman Jerry Weber is bagging the feed.

Fauser's introduced bulk delivery to give better service to farm folks. The service center has a bulk storage capacity of 42 tons. Bill Scott, Fauser driver, takes on a load of bulk feed from the mixer.

Salesman Ronald Burk introduces Purina Dairy Dust to Dairyman Louis Weber. Salesman Burk, like other Fauser employees, was Purina-trained.

PURINA ... YOUR PARTNER IN SERVING ANIMAL AGRICULTURE

Computer Formulation of Feeds

Setting up a ration for computer formulation means expressing its requirements and restrictions as simple equations. This makes it easy for nutrition, sales and production departments to understand each other.

By Dr. W. H. Hastings
Department of Flour and Feed Milling Industries
Kansas State University
Manhattan

Dr. W. H. Hastings, the author of the accompanying article, is shown decoding a print-out answer in Kansas State University's computing center. Feed formulation, he notes, requires a background of biochemistry, animal husbandry, pathology and milling engineering, and computer answers allow more time for this training to be used in making policy decisions. The K-State computer center is a special part of the university and is not part of the milling industries department. Dr. Hastings has worked with the center in computer formulation of feeds.

"A computer is a remarkably fast and phenomenally accurate moron." (1). If it is a brain, it has a very low IQ. The main difference between a computer and a desk calculator is that once a computer is started, it will accept data from tape or cards and follow a calculation technique developed by a much higher IQ. In other words, it can be told in machine language to generate its own instructions.

The computer, with mathematical programs which it can use, is valuable in feed formulation because it:

1. Saves time in calculations.
2. Prints out a great deal of related information if planned for in advance. The limit of information supplied by a computer is the limit of ability to state in machine language the answers desired.
3. Arrives at the minimum-cost or maximum-profit answer without trial and error.
4. Works within the requirements and restrictions set up in the problem, selecting ingredients for the answer according to constantly changing relative values.
5. Allows nutritionists to use their time for research and development in line with their training.

Objective Is "Least-Cost"

Most feed manufacturers avoid using a fixed formula and a fixed price. As a result, the nutritionist attempts to balance a set of ration requirements from a changing inventory. At the same time, production attempts to process variations in formulas into feeds acceptable to the milling equipment available. Each is operating with the objective of least-cost. The incentive for this is expressed by Brensike (2), "managerial and labor time can be more efficiently used in finding better sources of nutrients and achieving more efficient production than by any other activities."

The job demands of formulating feeds today are reflected by the elaborate calculating aids published by ingredient supply companies. A recently re-issued calculator (6) is in the form of a slide rule containing 17 different nutrient requirements and space for 69 ingredients which may contribute to these. The revised Cornell University work form (7) for poultry includes five 8½"x11" sheets with 24 nutrients listed and space for 42 ingredients.

Except for trial and error method, a hand-plus-desk-calculator solution of values for ingredients to be used in solving a set of requirement equations is impractical. Eventually values could be worked out which would satisfy the equations. In time, many answers could be worked out, all satisfying the equations. There is, however, only one least-cost answer, and the chance is remote of finding that by hand-solution within several working days.

EDITOR'S NOTE: Feed formulation with electronic computers has been of increasing interest in the feed industry, and in the accompanying article Dr. Hastings deals with this technique and its application. Computers may be leased, or the services of computer service agencies may be obtained for feed formulation work. Also, International Business Machines recently announced a program under which computers by the hour will be available in "Datacenters" in major cities, with the customer running his own work.

A mathematical technique developed for solving a system of simultaneous equations to maximize or minimize a cost function is called linear programming. It has been used by agricultural economists for several years and applied to feed formulation by Waugh (10) and Fisher and Schruben (3). A solution to a formulation problem containing 12 requirements and using 20 ingredients as sources of these requirements would require 3,000 to 4,000 calculations by this technique. Set up for computer solution, these calculations would be over in a few minutes. An early use of a computer in preparing feed formulas by linear programming was described by Swanson (9).

Computer Calculations

Computer calculations were recently completed for 252 formulas containing from eight to ten requirements and using from 19 to 32 ingredients. Machine time for this job was 26 hours, an average of just over six minutes per formula. One of the formulas was an all-purpose laying ration programmed for price changes over a ten-weeks' period. Table 1 shows computer prices compared with those actually in effect as determined by hand and using a work sheet. In each computer answer a considerable saving in cost was effected, averaging $1.07 per ton. The low computer cost for the last data was made possible by using the energy of gluten meal to allow some grains to be replaced by less expensive millfeed at a price differential between gluten meal and other protein concentrates not obvious to the formulator.

The formulas as derived by the use of a computer and priced in Table 1 were manufactured in the department's experimental feed mill in duplicate 3-ton lots with accompanying data on pellet production rate, percent fines after crumblizinz and KWHs per ton, with a follow-up of acceptability at the poultry farm. The high calorie minimum and low fiber maximum requirements limited millfeeds, which alternated between bran and midds from 0 to 181 lb. per ton. The above requirements also limited barley, which appeared in the answer only once, at 176 lb. per ton.

When milo was used at 1200 lb., trouble was experienced in pelleting. However, it was soon apparent that the usual wide-open steam valve setting caused milo flour to bake to the pellet intake cone and die holes, and when steam was slightly restricted, a normal feeder setting and energy use were maintained during production. The final values for production rate (4,500 lb. hr.) and KWHs per ton (7.3) were within variations found with corn-soybean oil meal formulas, and the percent fines (13.5) was somewhat lower.

No Fixed Relative Values

One fact was clearly brought out in analyzing this series of computer answers: for grains, protein concentrates, millfeeds and for minerals, there are no fixed relative values. When a formula requires a fairly high fat guarantee and methionine content above the contribution of natural protein supplements, corn may be worth $2.00 a ton more than milo. At other times, considering only protein, milo is worth $2.00 more than corn. When the calorie requirement is low and this is supplied cheaply from grains, bran may be worth 50¢ more than midds because of its higher phosphorus content. At other times, the higher fiber and lower calorie values in bran will make it worth less.

Limestone may be used as a filler to the limit of the calcium requirement until other ingredients, contributing more to the overall requirements, supply weight at a lower cost. With maximum and minimum requirements for calcium, it is interesting to watch limestone vary in amount, sometimes being used to just barely meet the minimum calcium equation and at other times the upper limit equation. These shades in formulation are difficult to evaluate by mind and hand. It is carrying supplemental values of ingredients to the ultimate in terms of unit cost per nutrient.

Restrictions on Formulation

Restrictions placed on formulation by experimental feeding and milling operations can be expressed in equation form and have been ably discussed by Hutton (4). With computers doing the formulation, time is then available to research groups for studying nutrition and restriction requirements. A good example of this is found in the low fiber, high calorie formula developed by Hutton (5) which unexpectedly brought into a broiler ration 10% distillers grains with solubles. A history of experimental tests with this ingredient would allow restrictive equations expressing its effects on feed conversion, dropping consistency and pigmentation, to be written into the problem with no question of its being accepted in the answer.

A year ago, a visitor from Europe described how he telephones his daily prices of ingredients to a computer service and uses the formulas on a least-cost basis without modification. He said he was not influenced by the traditional use of certain ingredients, since all were difficult to procure and often the supplies changed radically with seasons. There is no doubt that he could improve on his restrictions equations, but his concern over least-cost per unit of animal products showed that his least-cost formulas were a step in the right direction.

The emphasis on formulation has always been to meet requirements by balancing nutrients contributed from ingredients. Yet, for the most part, the tag declaration on a bag of feed shows only the outmoded expression of proximate analysis and ingredient content. Where a composition table can be used with confidence, and many can, a feed tag could show the requirements used in computer solutions as a better indication of the value of contents than any tag listing only crude protein, crude fat and crude fiber plus the common name of ingredients.

Costs of Computer Time

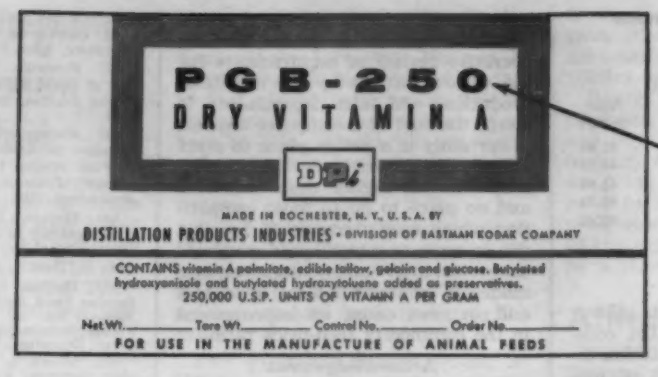
Computer consulting time for programming and setting up data costs about $10.00 an hour and machine time about $80.00 an hour (8). A feed company could easily learn how to set up a formula problem for computer input and present this data in table form to a computer service agency. More direction can be given a solution if prepared in final form by the nutritionist with an office accountant to assist, than can be given in the form of figures mailed into a machine operator. In addition, modifications may be effected after scanning a problem tableau which will save time later on.

For example, a 32% laying concentrate was set-up for solution with a calorie requirement of 720 per pound. It was obvious that the general low calorie content of high protein ingredients and the heavy expected use of minerals would make it necessary for a high level of animal fat to appear in the answer. A quick examination of the purpose of this concentrate revealed that when used at a two to one ratio with corn and/or milo, the feed would have a calorie-protein ratio of 61, more than necessary for the intended egg production. Also, the stability of certain nutrients

TABLE 1. Cost Per Ton of Laying Ration Formulated to Requirements by Work Sheet and by a Computer on Certain Days During a Period of Ten Weeks*

Period Weeks	Work Sheet Dollars	Computer Solution Dollars	Difference in Favor of the Computer Dollars
1	43.95	42.54	1.41
2	43.77	42.43	1.29
3	43.76	42.54	1.22
4	43.76	42.74	1.02
5	43.19	42.60	0.59
6	43.00	42.21	0.79
7	42.62	41.90	0.72
8	43.00	41.90	1.10
9	43.57	42.83	0.74
10	43.38	43.06	0.32
11	43.57	40.99	2.58

*Prices do not include 100 lb. fixed ingredients containing 50 lb. dehydrated alfalfa meal, 10 lb. salt and 40 lb. vitamin, mineral, antibiotic and drug premix.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250,000 U.S.P. UNITS OF VITAMIN A PER GRAM
Net Wt._____ Tare Wt._____ Control No._____ Order No._____
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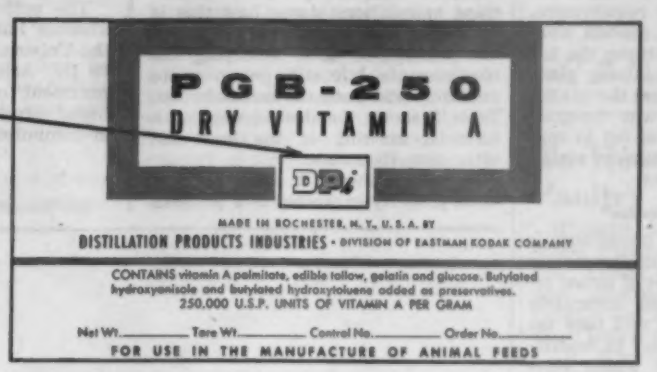
This is the trademark of DPi's dry vitamin A for fortifying feeds, premixes, concentrates, and other products fed to poultry and livestock. It consists of golden orange spherical particles in a size range between 30 and 120 mesh.

DPi has been a primary producer of vitamin A for a long time, was first to synthesize it commercially in this country, produces vitamin A in a modern plant using methods and processes developed in DPi laboratories.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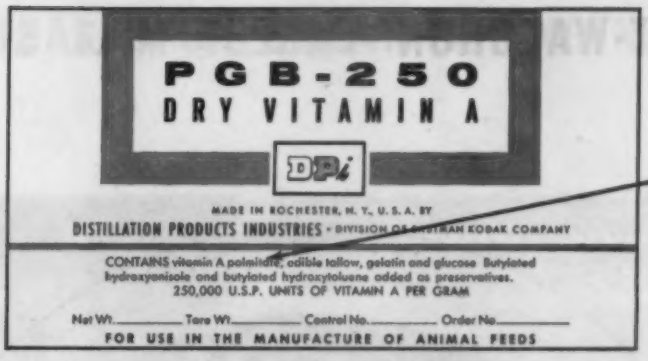
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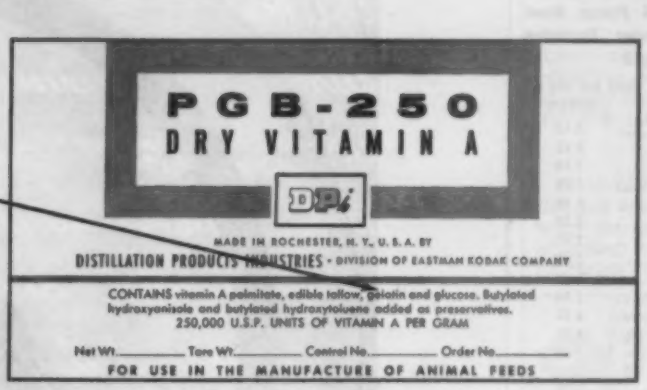
This is the inherently stable form of vitamin A. It resists the effects of heat, moisture, and long storage.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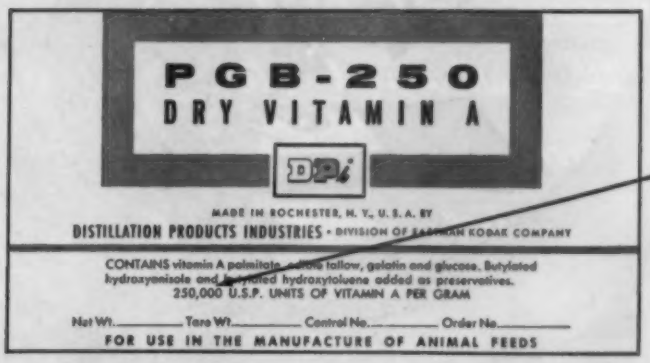
FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

The vitamin A in PGB-250 is protected from air and the destructive action of minerals by the use of fat, gelatin, and edible food-grade antioxidants. Even at 100 F. and 58% relative humidity in mineral pre-mix, PGB-250 has shown a potency loss of only about 1¼% per week.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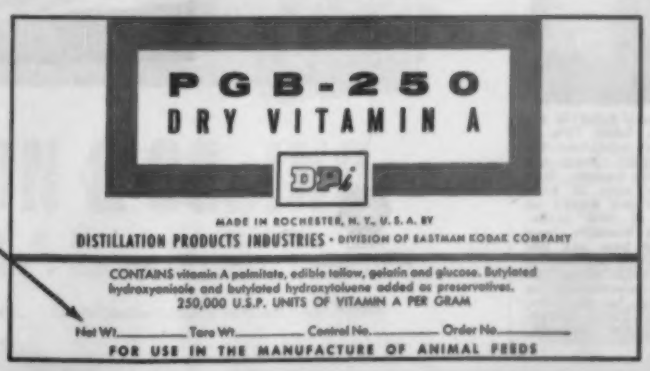
FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

The vitamin A potency of PGB-250 is 250,000 units per gram. You can also get potencies of 30,000, 20,000, or 10,000 units per gram. The diluent used in these dilutions is solvent-extracted soybean feed of particle size range especially chosen to blend with PGB-250.

PGB-250 Dry Vitamin A is packed in 25-pound and 100-pound polyethylene-lined fibre drums. For further information or a quotation, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto. (Also available from distributors throughout the country.)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FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

TABLE 2. Computer Development of Least-Cost Formula for Hog Fattener Using 18 Ingredients and Prices Supplied*

Iteration	Meat Scraps lb.	Midds. lb.	Bran lb.	Milo lb.	Phos-phate lb.	Mo-lasses lb.	Lime-stone lb.	Blood Meal lb.	Soybean Meal lb.	Cost Dollars
5	24	..	..	1026	26	..	22	72	..	45.88
6	47	..	..	1762	18	..	22	..	121	44.70
7	..	158	..	1608	24	..	28	..	151	43.95
8	..	448	..	1026	18	285	28	..	165	43.23
9 (Final)	..	..	534	1183	4	89	41	..	119	42.60

*Does not include 30 lb. fixed ingredients including 10 lb. salt and 20 lb. premix.

in a concentration of minerals and fat was questioned. Therefore, the calorie requirement was lowered and a formula was developed at a saving of $10 a ton over the original requirement. Since the feed sold as a protein, mineral and vitamin concentrate, the use of fat was left to the mixing plant which received and ground the grains. An experimental test was designed for studying the limits of fat in concentrates as affecting nutrient stability and milling operations.

"Efficiency Formulas"

When a list of fixed ingredients is necessary to meet tag declaration, a computer answer to a set of ration requirements may not be accurately called "least-cost." One mill uses the term "efficiency formulas" in describing computer answers which have been directed to include at least 5 to 10 lb. per ton of all grains and protein concentrates shown on the tag, with costs determining the extent of their use. This mill takes a computer output in replicate and distributes copies to production, sales, pricing, and purchasing departments. The print-out is scaled to read actual weight per batch or pounds per minute for each ingredient if a continuous mixing line is used.

In some cases, a least-cost answer may not be practical, even with modifying equations, because of last minute inventory limitations or plant break-down. Therefore, a print-out showing the next least-cost answer may be desired. Although the computer seeks the least-cost solution directly, a complete print-out of machine calculations shows how this is developed and each iteration has a new tableau of data, satisfying the requirements but still going on to minimize cost until the last iteration. Table 2 shows the development of a formula, arriving at the least-cost after nine iterations.

In most answers, a least-cost formula properly expressed as a problem is satisfactory. In addition to developing some sensational prices, the cooperative review of requirements for the various rations by the nutrition, production and sales departments, is worth the cost of a computer answer. It certainly is a better place to start and modify, if necessary, than a solution which is higher than least-cost and no place to go to meet competition which uses a computer. Leaving the answers to a high-speed, accurate computer after policy decisions are made, is conservation of resources and, in most cases, an improvement in the commodity feed-price ratio.

TABLE 3. Ingredients and Prices Used in Computing Hog Fattener Formulas Shown in Table 2

Ingredient	Cost per 100 lb. Dollars
Barley	2.10
Corn	2.23
Milo	2.10
Oats	2.20
Hominy	2.45
Bran	2.23
Middlings	2.42
Shorts	2.60
Cottonseed Meal	3.40
Soybean Oil Meal	3.50
Blood Meal	6.80
Fish Meal	8.75
Meat Scraps	5.40
Tankage	5.40
Dehy. Alfalfa	3.25
Limestone	0.54
Phosphate	4.20
Molasses	1.57

Acknowledgement

The author is indebted to Dr. S. Thomas Parker who is in charge of the University's Computer Center and to Dr. Arlin Feyerheim of the Department of Statistics for help in linear programming and instruction in computer operation.

REFERENCES

(1) Andree, Richard V. — Programming the IBM 650 Magnetic Drum Computer and Data Processing Machine; Henry Holt and Company, New York; 1958.

(2) Brensike, John V.—Inventory Policies of Feed Mills, USDA Agricultural Marketing Service, Bulletin No. 70; September, 1956.

(3) Fisher, Walter D., and Schruben, Leonard W.—Linear Programming Applied to Feed Mixing Under Different Price Conditions; Journal of Farm Economics, 35; November, 1953.

(4) Hutton, Robert F.—Use of Linear Programming in Feed Manufacturing; Feedstuffs, Sept. 27, Oct. 4, Oct. 11, Oct. 18, Oct. 25, Nov. 1, Nov. 8, 1958.

(5) Hutton, Robert F. — A Least-Cost Broiler Feed Formula; Production Research Report No. 20, USDA Agricultural Marketing Service and Pennsylvania Agricultural Experiment Station; May, 1959.

(6) Merck & Co., Inc.—Chemical Division, Rahway, N.J.; 1959.

(7) Poultry Husbandry Department, Cornell University, Ithaca, N.Y.; Revised March, 1959.

(8) Statistical Tabulating Corp., 20 W. 9th Street, Kansas City, Mo., and The Service Bureau Corp., University Way, Minneapolis, Minn.; 1959.

(9) Swanson, Earl R.—Illiac's Electronic "Brain" Gives Fast Minimum-Cost-Mix Answers to Feed Formulation Problem; Feeds Illustrated, 6; May, 1955.

(10) Waugh, Fredrick V. — The Minimum-Cost Dairy Feed; Journal of Farm Economics, 33; August, 1951.

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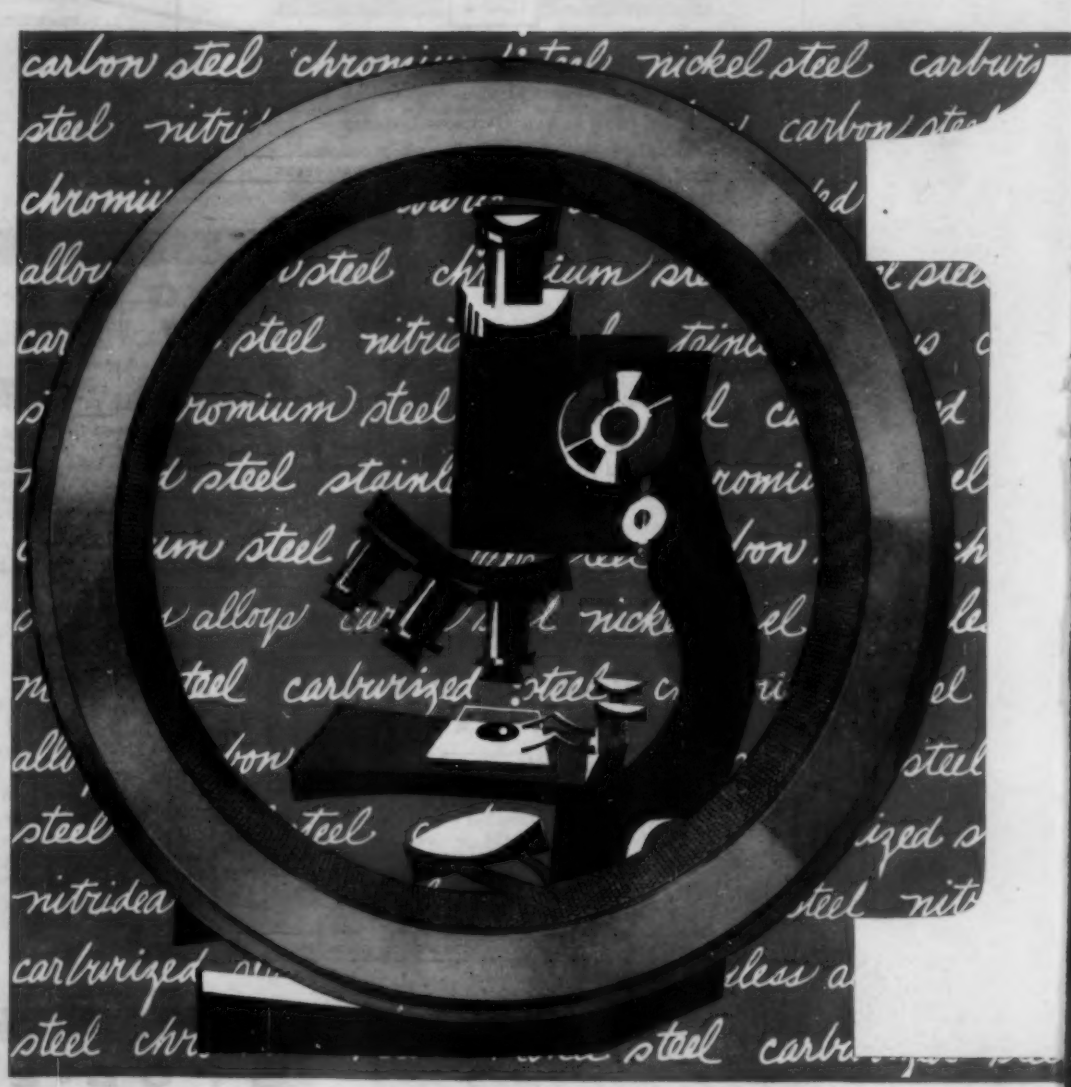

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Southern Poultrymen Believe Integration Is 'Here to Stay'

ASTOR PARK, FLA.—Integration in the poultry business in the South and in Florida on a large scale is not just around the corner, it's here, and it's going to stay. This was the general opinion at the 18th annual Florida Poultry Institute regarding contract production of eggs and chicks.

The big question at the institute this year was not when or how contract production will come, but rather what will become of part-time poultry farming.

Edward Karpoff, economic statistician for Agricultural Marketing Service, ventured the opinion that contract production will "discourage" part-time farming.

During a general discussion regarding production in Florida, Brooks Herman, Oakcrest Poultry Farms, Jacksonville, said integrated operations are here to stay. He said he doesn't like the idea, but added that he had placed baby chicks out for egg production under contract as far back as 1956. "Flocks will get larger and poultrymen fewer," he predicted. "But I hope I am wrong in my predictions."

Frank Coune, nutritionist for Jackson Grain Co., Tampa, moderated the panel discussion and he commented that integrated broiler and egg production actually dates back into the 1930's.

Phil Freeman, Ralston dealer at Palatka, said he started placing broiler chicks with farmers under contract five months ago.

Mr. Herman pointed out that he pays his contract growers "wages" of 5½¢ doz. for all grade A eggs and 4¢ on small ones, plus a bonus for savings made in feeding.

During the panel discussion it was pointed out that one feed company in Marion County is preparing to place 50,000 chicks with farmers under contract, 10,000 birds to each poultry house.

Roger Williams, Gainesville egg producer, who has a $10,000 feed mill and buys his grain and concentrate in large volume, predicted producers are going to turn to automation even more so in the future. He said he is using machinery as much as possible to cut egg production costs. He said he is shooting for a mark of 20¢ doz.

Allied Mills in Group

WASHINGTON—Allied Mills, Inc., Chicago, is one of 11 food industry firms and associations who have joined the National Food Conference in recent weeks to give support to the conference's 1959-60 teenage nutrition education program. The 11 latest members are in addition to the 31 who previously had declared their support of the program. They include the American Feed Manufacturers Assn.

"It's an old football painted white—Get ready! Here comes my uncle from the city now."

To Head Arkansas Poultry Disease Lab

RUSSELLVILLE, ARK. — Dr. Rudolph Frohlich, Raleigh, N.C., has been named head of the poultry disease laboratory of Arkansas Tech College, the Arkansas Livestock Sanitary Board has announced.

Dr. Frohlich, who formerly was poultry pathologist for the North Carolina Department of Agriculture, is a graduate of New York State Veterinary College.

One of two in Arkansas, the Arkansas Tech laboratory essentially will serve 11 counties in the Arkansas Valley poultry-producing region. The counties are Conway, Crawford, Faulkner, Franklin, Johnson, Logan, Perry, Pope, Sebastian, Van Buren and Yell.

Dr. Frohlich said the laboratory will be open from 8 a.m. to noon five days a week to serve the poultry industry. In the afternoons, Dr. Frohlich plans to make field tours in an effort to take care of any poultry disease problems which cannot be handled in the laboratory.

Joe Ray, Danville; S. D. Mitchell, Russellville, and Dr. J. M. Thompson, Pottsville, have been appointed to an advisory committee to direct work of the new laboratory.

EGG PRICES

COLUMBUS, OHIO — Egg prices this fall are likely to be 3-4¢ a dozen below prices the same time last year, according to Ohio State University extension economists.

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Firm Sponsors Started Pullet Program To Supply Small Laying Flock Owners

By Al P. Nelson
Feedstuffs Special Writer

A small layer flock finance plan has been initiated by Torger and Erling Torgerson, who operate the Mapleton (Wis.) Feed & Hardware Co.

The Mapleton finance plan for medium sized flocks is based on the fact that many farmers would like to stay in the egg business with small flocks from 100 to 600 layers, but do not have the labor available to buy baby chicks and feed and care for them through a four-month period until they begin to lay.

Therefore, the Torgersons have contacted a number of farmers who are willing to raise batches of baby chicks for the Mapleton firm on the following basis:

The chick raising farmer buys chicks, feeds and whatever equipment he needs from the Torgersons and gets 30 day credit for this purchase. At the end of 30 days the amount of the purchase is financed by the farmer through a local bank at a straight 6% interest rate.

Whatever feed and other material the farmer needs for the next 30 days, is similarly financed by the bank at the end of that period. Every 30 days the chick grower finances his purchases until the chicks are four-month-old pullets.

Guaranteed Price

The Mapleton Feed & Hardware Co., meanwhile, guarantees the chick raiser a market for the started pullets at the end of the four month period. A minimum of $1.75 per started pullet is also guaranteed, which the Torgersons claim is a profitable price for the good farmer manager.

While the chicks are growing the Torgersons line up the farmers who want started chicks. The farmer who buys less than 600 chicks when they reach the pullet stage pays $1.85 per pullet. Those who order over 600 get them for $1.75.

During the 1959 season, the Torgersons raised about 6,000 pullets on this plan for farmers in the area. They plan to expand the program next year.

"With the ups and downs of the egg business, some farmers this year decided to let their poultry houses stand idle until prices get better," Torger Torgerson said. "Farmers did not want to make the investment in chicks, plus feed and labor while egg prices were low. What some of them needed was a plan like ours which would provide them with a specified number of pullets ready to lay at a specified price. A number of them who refused to buy baby chicks in spring told me if started pullets were available in fall, they'd buy them from us at a reasonable price. So that is why we started this plan."

The Torgersons believe that this layer flock plan will enable many farmers to stay in the layer flock field on a small basis. On the other hand, there are enough farmers with housing facilities who are willing to take on the job of raising chicks to pullets when they know they have a guaranteed price for each bird.

Experimental Basis

"We entered this plan more or less on an experimental basis," Mr. Torgerson said, "and it looks as if there will be a developing market in this region for started pullets. With farm labor costs being unusually high, and with farm labor in some instances impossible to obtain, the farmer feels this flock layer plan is something that can help him. The raising of baby chicks for layer flocks comes at the busy spring and summer season when the farmer is swamped with field and other work. But, at the time he can buy started pullets in the fall, his field work load has lessened and he can spare the time to take care of a 200 - 1,000 hen flock."

Feed Business

Mr. Torgerson also points out that such a plan offers opportunities for the small and medium sized custom mill to get a lot of poultry feed business which is not so highly competitive as the business coming from large

BALLING GUN—A new plastic balling gun is now available to farmers for treatment of infectious scours in livestock. Chas. Pfizer & Co., Inc., New York, recently introduced the gun as the consumer premium part of its fall animal health promotion of Terramycin A D Scours Tablets. The new gun is equipped with a short plunger for quick release of a single tablet from the tight-grip receptacle, the company said. The gun is being offered as a free premium with the purchase of each special 16-tablet package of the Terramycin tablets. This product now includes Vitamins A and D, plus niacinamide (furnishing B-complex).

ANOTHER ARMOUR FIELD REPORT

Max Rosenstock, Idlewild Farm, Kingsley, Iowa finds DYNAFAC improves grade, practically eliminates feedlot bloat and founder, keeps cattle on feed better!

Max Rosenstock and his partner, Clarence Voss, have been feeding DYNAFAC for the past two years:

"It looked like a good product," they said. "We felt it deserved a fair trial under actual feedlot conditions. After testing it, we were so completely satisfied, that DYNAFAC is now a standard part of our feeding program."

"Dynafac gives us a number of direct benefits," says Mr. Rosenstock. "Since we started feeding it, we've had no trouble with bloat, and cattle stay on feed better—even with a high grain ration. The carcass quality of our animals is much higher, and they grade higher."

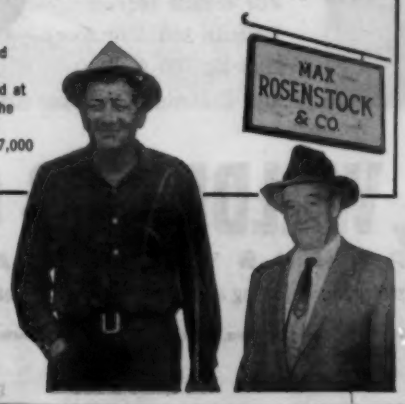
"When you add this to an average daily gain of 2.6 to 2.7 lbs. over a two-year period, you can see why we're sold on Dynafac!"

Mr. Rosenstock and Clarence Voss are only one example of the many progressive feeders who are switching to Dynafac. They represent a large and growing market for this proven feed additive.

Dynafac's big promotional program is designed to help you get your share of this business. Plan to add Dynafac to your formulas and concentrates. Write for prices and complete facts.

In 16 separate tests, in 6 states, averaging over 60 head per test, Dynafac showed a positive advantage sixteen times. Increase in daily gains ranged from 0.12 to 0.75 lbs. per head — averaged 0.32 lbs./day in favor of Dynafac feeding.

Max Rosenstock and Clarence Voss have 4,000 cattle on feed at all times. During the year, they turn out between 6,000 and 7,000 head of cattle.



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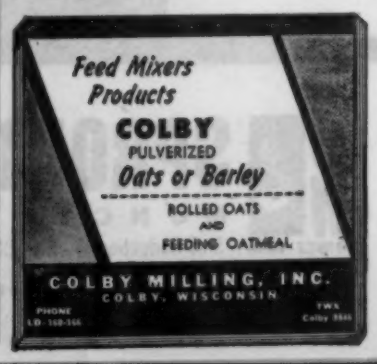

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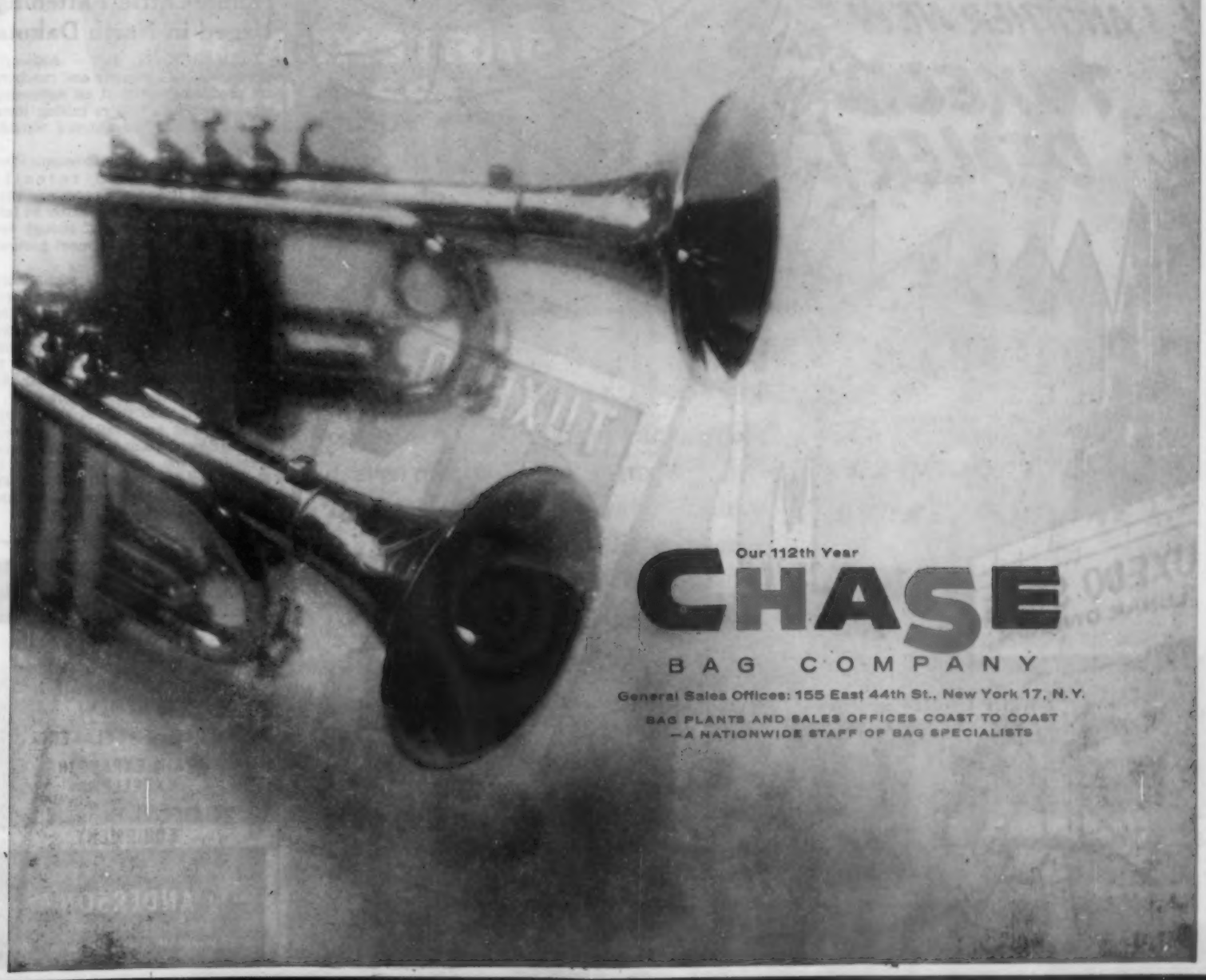

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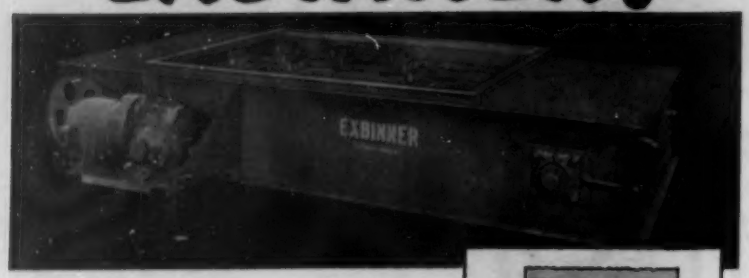

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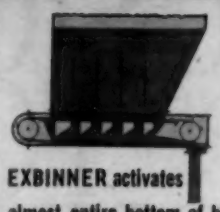

EXBINNER activates almost entire bottom of bin

- Prevents bridging in bin
- Eliminates segregation of materials
- Simplifies thorough clean-out
- Feeds evenly, with uniform consistency

commercial flocks. Some larger feed firms, he asserts, can offer large commercial flock owners better prices for delivered feed than can the small mill. On the other hand, a plan such as Torgerson's is already proving attractive to farmers who have up to 1,000 birds, and insures the poultry feed volume for the Mapleton Feed & Hardware for a considerable period.

"After the started pullets are sold to an interested farmer, we follow right up and give him excellent feed and service and flock supervision, so that usually he wants to continue to deal with us," reports Mr. Torgerson. "And, since we have a well equipped custom mill, we can work in his own grains into the poultry ration. Our plan is definitely keyed to the small flock poultry owner who usually has a sizable farm and has grains to utilize in the feeding program."

The Mapleton Feed & Hardware Co. is a member of the IDO, an independent feed dealer and mill organization operating in Wisconsin, with headquarters at Madison. One of the aims of this organization, according to Mr. Torgerson, is to "help the farmer reap some of the benefits of integration and yet remain as independent as possible."

"Now that this plan has been in operation for one season, we are going to try to get as many advance orders as possible for 1960 started pullets," Mr. Torgerson explains. "Farmers know how the plan works and are familiar with it. I think if market conditions are favorable we will be able to expand this program considerably next year and get many advance orders. We are definitely not going to produce a lot of chicks for layer flocks without placement commitments."

Arizona Gets Grant For Phosphorus Study

TUCSON, ARIZ.—A $5,000 grant has been awarded the University of Arizona poultry science department by International Minerals and Chemical Corp. to investigate the relationship of the phosphorus content of a chicken's diet to its biological value.

Dr. A. A. Kurnick, member of the university's poultry science department and head of the project, believes an increase in calcium and phosphorus metabolism may help counteract some of the bad effects of unusually hot weather on egg shells. He said such a finding would be of great benefit to the $5 million poultry industry of Arizona, which has very hot summers.

The project will have two purposes: To develop new methods of measuring the amount of phosphorus available for use by the chicken and to study the effect of phosphorus on egg shells. Dr. Kurnick said measuring available phosphorus is important because only a certain percentage of the element eaten can be assimilated by a chicken.

Dr. Kurnick will be assisted in the project by Terrell A. Crowley, graduate student in the department of agricultural biochemistry and nutrition.

Home Cattle Fattening Urged in North Dakota

BISMARCK, N. D. — Although North Dakota's farmers and ranchers are producing cattle at an increasing rate, apparently they're raising them to be fed and slaughtered outside the state.

The North Dakota Economic Development Commission recently stated that it appears necessary that more of North Dakota's cattle be fattened within the state if enough are to be available to keep meat packers operating.

EDC officials said preliminary studies by North Dakota Agricultural College, the commision and the Greater North Dakota Assn. indicated it is more economical to fatten and slaughter cattle in the state than to ship the animals alive to South St. Paul or Chicago for slaughter.

The study also showed ample supplies of feed are available for feeding cattle and pointed out a 124% increase in the number of cattle in North Dakota from 1924 to 1957 (624,000 to 1,400,000 head), while the total U.S. increase was only 71%.

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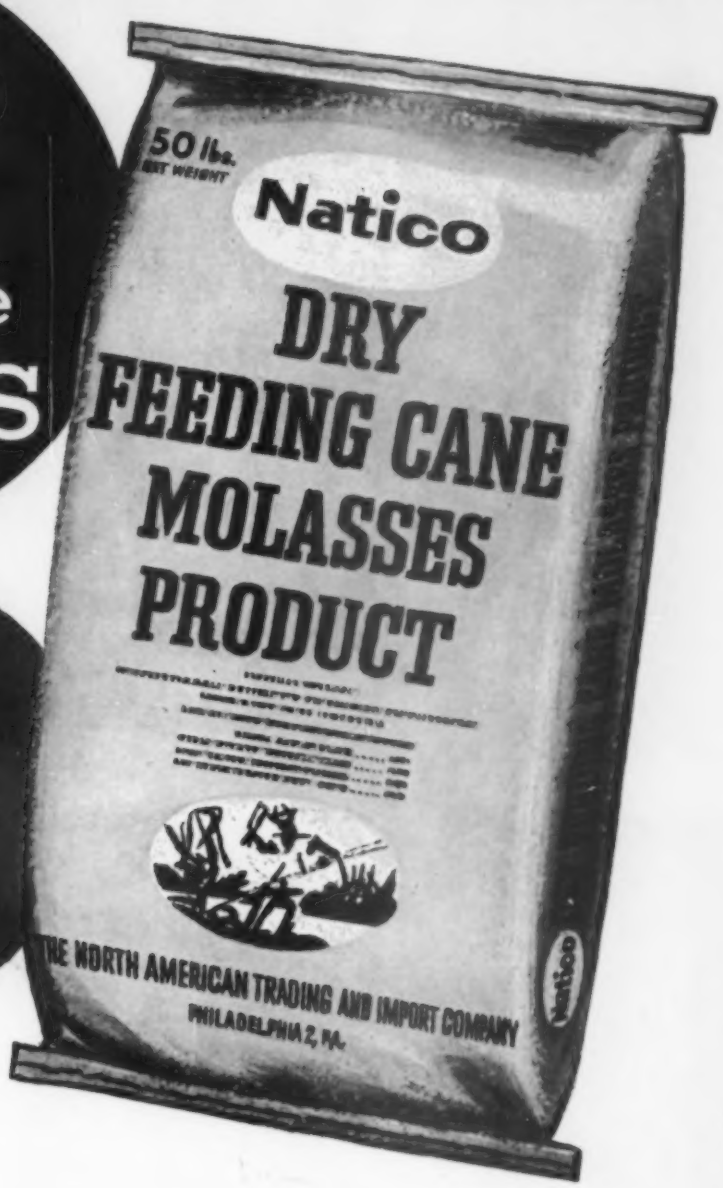

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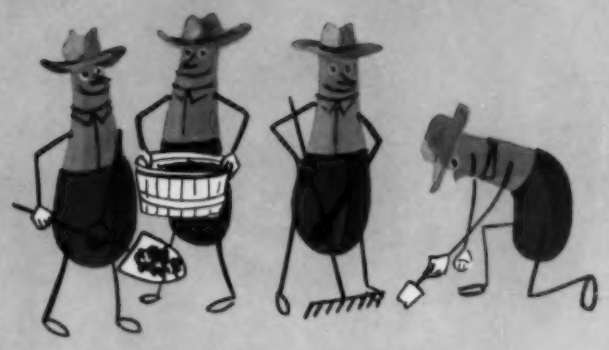


Selective Action Means

BENEFICIAL BACTERIA ARE NOT HARMED

BEWARE THE BAD BACTERIA!

These are "gram-positives" – the harmful bacteria that produce secondary disease, invade the tissues, and form pus and poisonous toxins . . . and, the free-loading gluttons in the intestinal tract that live off the nutrient material that should go to the bird or animal, but doesn't.

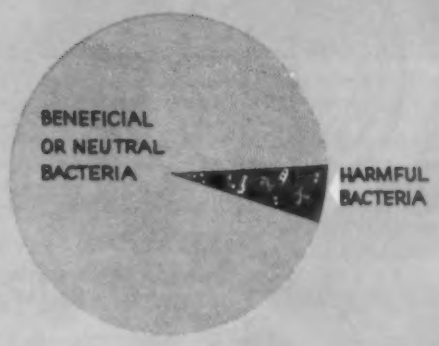
STRIKE WHERE THEY LIVE!

It's when many of the harmful bacteria escape from the gut that they become dangerous. The place to control them – and the only place – is in the intestinal tract – before they invade the tissues, organs and glands.

Buy BACIFERM...

zinc bacitracin antibiotic supplements

..selective action is the pay-off!

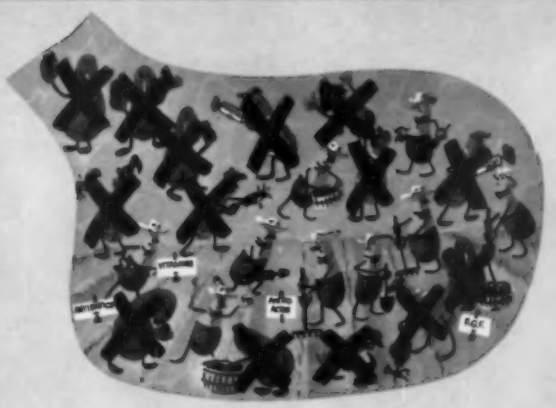


BACTERIA AREN'T ALL BAD!

Of all the bacteria normally present in the intestinal tract of the chicken, the turkey or the pig, only about 5% are harmful. The rest are beneficial or, at worst, neutral. In healthy animals, a proper balance is maintained among the many kinds of microorganisms normally present in the intestinal tract, thus assuring adequate nutrition.

MEET THE FRIENDLY COLIFORMS!

These are the beneficial "gram-negative" bacteria – the productive "farmers" in the digestive tract that "raise" valuable B vitamins. Some antibiotics destroy friendly coliforms, change the normal population balance, and allow harmful, resistant bacteria and abnormal microorganisms to multiply. Baciferm's selective action destroys dangerous bacteria without harming beneficial bacteria.



BACIFERM TO THE RESCUE!

Baciferm, the zinc bacitracin antibiotic supplement, does all its work in the intestinal tract – maintains an effective concentration from one end of the tract to the other. And zinc bacitracin does its job selectively. No indiscriminate destruction of "good" and "bad" bacteria alike – as in the case of some other antibiotics.

The buy is Baciferm – selective action is the pay-off. But that's not all. Only Baciferm contains bacitracin in the zinc form–made under Patent No. 2,809,892. And CSC's zinc bacitracin is not merely antibiotic on an inert carrier – it also supplies B vitamins, high protein, vitamin K and unidentified growth factors.

Anything else? Yes! More and more feed manufacturers want the full bactericidal action of Baciferm because the older "broad spectrum" bacteriostatic antibiotics seem to have lost their punch, appear to have built up resistant strains of bacteria. You can add Baciferm to each ton of feed for $2 to $4 less than the tetracyclines. The buy is Baciferm.

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New Hampshire Poultry Growers Association Discusses Competition

SUNAPEE STATE PARK, N.H.—Many changes will be taking place in the near future, and a lot is needed before the poultry industry can be said to be on a sound footing.

This was brought out by a panel on "How We Can Compete in the Poultry Business," led by Dr. W. C. Skoglund, professor and chairman of the University of New Hampshire poultry science department. The panel discussion was part of the annual New Hampshire Poultry Growers Assn. meeting held at Sunapee State Park recently.

R. C. Durgin of Newmarket, hatching egg dealer, said it will be several months before things improve for hatching egg producers. Placements by the primary breeders indicate an improved situation by next winter or spring. The present tightening up of credit, he felt, will lead to a sounder industry. New Hampshire producers, he said, must work toward more efficient houses, efficient flock size, equipment, and above all, must give their flocks attentive management.

Dr. Richard Saunders, agricultural economist, University of Maine, said that the future of the New England market egg producers depends on how quickly they can make adjustments. Markets, he said, must be supplied with uniform supplies, both in quality and quantity. This means closer relationships between producers and marketing organizations, he said. Both must improve their efficiency. This will mean more integration in the market egg business, according to Dr. Saunders.

Dr. Saunders said the New England consumer preference for brown eggs isn't as deep as some think. A survey of housewives in Maine showed that nearly a third either preferred white eggs or didn't care what the color of the shell was. Most of the others would take white, rather than go to another store, if the store they were shopping in didn't have brown eggs.

PANEL MEMBERS—Shown (left to right) are the panel members who discussed, "How We Can Compete in the Poultry Business," at the annual New Hampshire Poultry Growers Assn. meeting: Dr. Richard Saunders, agricultural economist, University of Maine; Gilman Sylvester, dressing plant manager, United Co-op Farmers, Leominster, Mass.; Harry Grant, Wirthmore Feeds, Waltham, Mass.; Dr. W. C. Skoglund, professor and chairman of the poultry science department, University of New Hampshire, and R. C. Durgin, Durgin's Egg Service, Newmarket, N.H.

Gilman (Gig) Sylvester, manager of the United Cooperative Farmers dressing plant in Leominster, Mass., said that the poultry meat business is having a hard time, but it will come back. He said that everyone in the business must cooperate 100% in order to make it a more healthy industry. He predicted expanding markets, but cautioned the audience to choose their associates carefully.

Harry Grant of Wirthmore Feeds, Waltham, Mass., reported on a trip to the Midwest, far West and South, studying market egg developments. Many large and rapidly expanding integrated egg production setups, he said, were doing a good job of efficient production and marketing, and producing a high quality product.

New England producers, he said, must make their houses more efficient, keep better records, and raise more efficient birds.

The New England Egg Council, formed by the New England Egg Producers Assn., was described by James Timberlake, Waltham, Mass., executive secretary of the council. He said the council was designed to develop and promote New England quality eggs.

Robert Horsburgh, Fremont, was reelected president; J. P. Weston, Bennington, vice president; Stanley Smith, Hollis, treasurer, and Richard Warren, Durham, secretary.

Detector Installations

DES MOINES, IOWA—The installation of 105 electronic units in 8 states was announced recently by Hot Spot Detector, Inc., Des Moines. Hot Spot is an electronics subsidiary of Neptune Meter Co.

The installations were as follows: 30 in Nebraska, 20 in Kansas, 12 in Texas, 9 in Ohio, 11 in Iowa, 11 in Illinois, 3 in Oklahoma and 9 in Arkansas.

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FEEDING TRIALS PROVE BENEFITS

Rations supplemented with higher dicalcium phosphate levels produced faster liveweight gains and more efficient feed utilization in a series of cattle feeding tests at State Agricultural Experiment Stations.

IOWA STATE[1] Tests conducted by Iowa State College researchers indicate cattle receiving high dicalcium phosphate rations graded higher at slaughter and returned greater margins over feed costs. The Iowa State report concludes . . . in some cases a higher level of total ration phosphorus, possibly as high as 0.3 percent, may well be needed.

PURDUE[2] According to a study conducted by Purdue University researchers, raising the phosphorus level in a corn-soy ration from 0.30 to 0.45 percent improved rate of gain 29% and feed efficiency 6.6% when fed to growing swine on ladino pasture. A further increase in phosphorus to 0.60% improved feed efficiency 5.7%, but failed to stimulate gains further. Several pigs on the corn-soy basal ration exhibited borderline phosphorus deficiency symptoms.

SOUTH CAROLINA[3] An animal deficient in phosphorus from either hereditary genetic defects, or because of prior consumption of a low phosphorus ration may bloat, regardless of the level of nutrition in the feed crop. Therefore, a critical phosphorus deficiency in ruminants should be corrected through feeding of dicalcium phosphate or other mineral phosphates or by feeding high phosphorus concentrated feeds prior to being placed on luscious legume pastures.

TEXAS[4] In feeding trials on the King Ranch in Texas, cows fed supplemental phosphorus weaned 39% more calves, averaging 50 pounds more weight per calf. In addition, feed lot operators in the Southwest have discovered that higher phosphorus levels result in faster gains.

Coronet DIKAL is all biologically usable phosphorus, available to both plant (rumen bacterial micro-organisms) and animal life and highly palatable to both poultry and livestock. Coronet Granular DIKAL is easy to handle, flows freely, disperses evenly and eliminates annoying dust. From Texas City, the only feed grade dicalcium production point west of the Mississippi River, you receive faster, more dependable service.

1. Different Kinds and Amounts of Phosphorus in Fattening Cattle Rations—Agricultural Extension Service, A. H. Leaflet 209; Wise Burroughs, Arthur Raun, Edmund Cheng, C. C. Culbertson, Iowa State College.
2. Phosphorus and Protein Levels for Growing-Finishing Swine on Legume Pasture—C. E. Jordan, J. H. Conrad, M. P. Plumlee; W. M. Beeson, A. H. 215, Purdue University.
3. Relation of Phosphorus Deficiency to Acute Bloat in Ruminants—H. P. Cooper, 69th Annual Report, South Carolina Agricultural Experiment Station, Clemson, S. C., May, 1957.
4. Methods of Supplying Phosphorus to Range Cattle in South Texas—Texas Agricultural Experiment Station, Bulletin 773; E. B. Reynolds, J. M. Jones, H. H. Jones, J. F. Fudge and R .J. Kleberg, Jr.

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LET'S TAKE ANOTHER LOOK

"Let's take another look at our plant operations and see how we compare. Have we kept pace? If we take advantage of resources available to us and do our best job of planning and scheduling, we should be pleased."

By W. L. Alley
Pay Way Feed Mills

"The production of formula feed has made very striking increases in the last several years. Feed manufacturers have become more and more production minded, and more interested in new and modernized plants and production facilities and methods. They have built new mills, remodeled old mills, and installed new equipment and techniques to take care of a business volume, which has increased 75% since 1942, and promises to increase more in the years ahead. Formula feed production in the pre-war year of 1940 was only 18 million tons, and it is predicted that the formula feed production in 1960 will be 55 million tons.

"At the present rate of increase, a population of 200 million people is expected by 1975. At the same time, per capita demand for animal products has been increasing. Where are these additional products to come from? Some of the increase can be obtained from greater numbers of cattle, hogs and poultry, but much of the increase must come from more efficient feed use."

Pay Way Feed Mills uses the electro-mechanical method of batching and mixing in its plant. This, the author of the accompanying article notes, lends itself nicely to a one-man operation in selection and batching of ingredients. The mill also has a man in charge of premixes. The controls on the wall in back in this picture operate the hammermill. Using remote-controlled air gates and timing devices, the man in charge of the mixing room supplies his own ground material.

This sounds like a page out of anybody's notebook today; however, the above statements came from the Nov. 6, 1954, issue of Feedstuffs magazine. Many of these statements are as true today as they were in 1954. As to the predicted goal of 55 million tons in 1960, I will say, "Let's let it stand and see if it is realized."

Recently, Dean Orval G. Bentley of South Dakota State College stated, "It is an economic fact of life that the conversion of feed into meat, milk and fiber must continue to improve if the producers and feed industry are to survive the cost-price squeeze facing agriculture today." I also find that people, instead of projecting the 200 million population, are now talking about a population of 220 million by the year 1975.

What does this mean? Let's take another look at our own operations and our own part in the business to see how we compare. Have we kept pace with the great urge to automate, increase production and lower production costs? Engineers can design, construction people can build plants, but these plants are operated and controlled by people. The costs of operating plants are charged first of all to management. The job of managing revolves to a very great extent around the job of planning.

Importance of Planning

I firmly believe that the planning in production is going to be one of the most important parts of the feed industry in the future. Costs are going up on labor and machinery and, therefore, we've got to do a good job of planning so we can conserve on the money. It is management's job to use scheduling or planning to make the most efficient use of men, machinery and materials. An anonymous sage has observed, "No strike, no war, no disaster can so completely and finally destroy man's business or his profits as better methods in the hands of an enlightened competitor."

In the last several years, we have had some very important improvements in equipment and in methods which have enabled us to do a much better job in planning and programming our own operations. Perhaps if we take just a very brief look into the seven cost centers as they were set up by the Midwest Feed Manufacturers Production School, we would get another opportunity to take another look at our own operations. (See table for cost centers and man-hour figures.)

INGREDIENT RECEIVING: The great swing to bulk handling of inbound ingredients probably has done more to help offset the rising labor costs in ingredient receiving than any other single factor. Coupled with this, we have several different methods of receiving and unloading bulk cars, namely, the conventional power shovel, utilizing a pit and elevator leg; the power scoop on the front of electric trucks, utilizing an unloading pit and elevator leg; pneumatic unloading out of boxcars; utilization of hopper cars, with mechanical screw conveyor feeding bucket elevator; hopper cars utilizing pneumatic handling; and hopper cars utilizing the screw conveyor, either under or over the railroad track, feeding a pneumatic system.

There are many advantages and disadvantages to each of these systems; however, in our plant we find that the conventional power scoop and leg will do a very efficient job from a man-hour standpoint, and also from the standpoint of total investment and operating costs. We also utilize hopper cars, mechanical screw conveyor feeding pneumatic system, to handle some of the more dusty materials, and here again we find that it works very efficiently and satisfactorily. Utilizing one or both of these systems, we find that the costs as set out in the ingredient receiving cost center are very well in line.

GRAIN PROCESSING: The next cost center is grain processing, and I'm sure this cost will vary from plant to plant, depending entirely on the number of grains and the methods of processing.

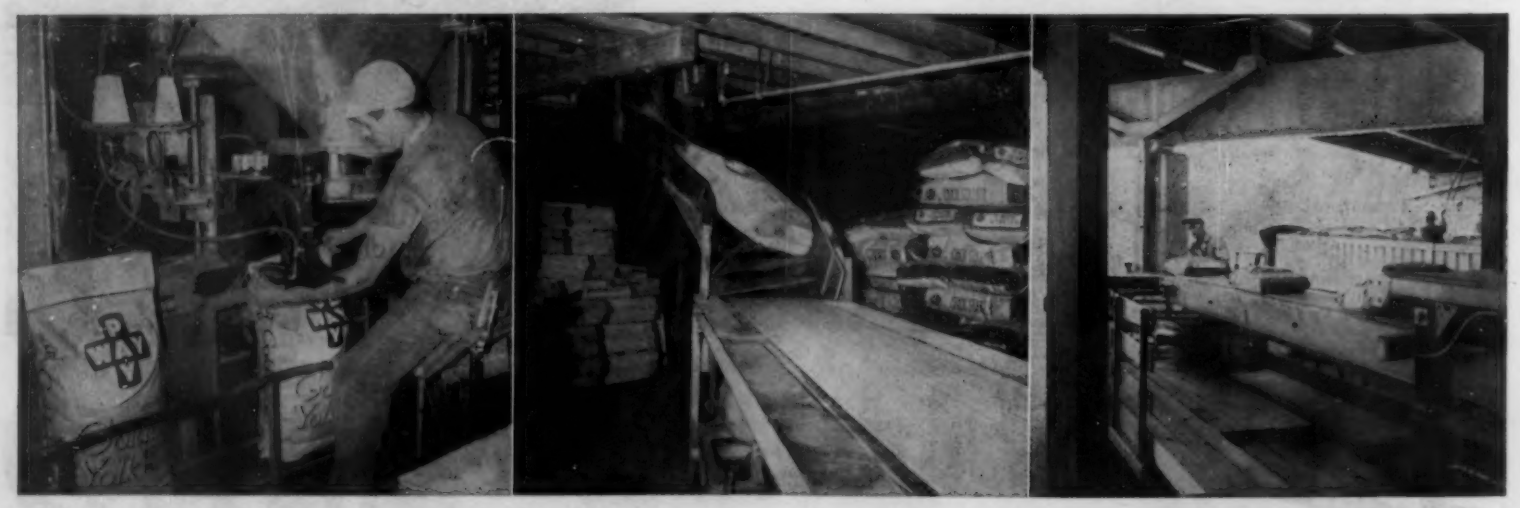
In our own particular case, we find it is rather difficult to separate the grain processing cost from ingredient receiving or mixing.

From a man-hour standpoint, grain processing is handled pretty much automatically. Utilizing remote controlled air gates and timing devices, the man in charge of our mixing room supplies his own ground material. This man merely turns a selector switch to the grain that he is using and the hammermill motor starts. After the motor reaches its full speed, the air operated gate on that particular bin opens, allowing the whole grain to flow to the hammermill. At the same time the selector button was turned to select the grain, the spout from the hammermill cyclone automatically selected the proper ground grain bin. As the ground grain reaches a desired level, a mercury switch is activated, causing the remote controlled air gate on the whole grain bin to close and also actuating a timing device which is preset to allow the hammermill to completely empty and then shut off.

This system has been in effect for quite some time, and has proved very satisfactory. It has also eliminated the

W. L. Alley

AUTHOR—W. L. (Larry) Alley is vice president of Pay Way Feed Mills, Kansas City. Mr. Alley's early training and education were principally in traffic, and now his work is primarily concerned with purchasing, production and traffic. He entered the feed business in 1942 and has been associated with Pay Way since 1946. Mr. Alley is a director and secretary of the Midwest Feed Manufacturers Assn. and is a member of the executive committee of the purchasing agents committee of the American Feed Manufacturers Assn. He is vice chairman of the board of trustees of the Feed Production School and is vice president of the board of directors of Feed Production School, Inc. He has been active in the Production School since its inception.



These pictures illustrate the packaging and bag conveying operations at Pay Way Feed Mills' plant in Kansas City. The firm developed its own automatic actuating device for its sewing machines operating in conjunction with an automatic thread cutter, so the plant uses only one man operating each Thayer packing scale. The bag closes itself and moves on to the customer's truck, warehouse floor or rail car by belt conveyor. Using telescoping conveyors to load trucks and utilizing the truck driver, the plant thus has one man packing the feed. When two of the packing scales are used, a third man maintains a supply of bags and tags, check weighs and helps keep the scales in operation.

MAN HOURS PER TON*

	COST CENTER	30 TON MILL	100 TON MILL	200 TON MILL
I	RECEIVING	0.162	0.080	0.071
II	PROCESSING	0.038	0.019	0.008
III	MIXING	0.341	0.145	0.122
IV	PELLETING	0.119	0.075	0.046
V	PACKING	0.175	0.109	0.087
VI	WAREHOUSING	0.671	0.309	0.264
		1.506	0.737	0.598
VIII	MAINTENANCE	0.160	0.150	0.126
	TOTAL LABOR	1.666	0.887	0.724
	FOREMAN	0.133	0.080	0.080
	TOTAL	1.799	0.967	0.804
		3 TONS PER HOUR	6 TONS PER HOUR	9 TONS PER HOUR
VII	HIGH MOLASSES	0.369	0.212	0.216

* Figures based on total tons of feed produced per day, not at tonnage at each Cost Center

At the 1956 Midwest Feed Production School, the feed industry was presented for the first time with data on in-plant cost standards. These standards were based on extensive studies of labor requirements for the various operations in feed plants of different sizes. Above is the summary of figures on man-hours per ton. This summary is part of the published and copyrighted proceedings of the school. The cost centers and man-hour standards are referred to in the accompanying article.

overfilling of bins and the wasting of ground material.

MIXING: Moving on into the next cost center, which is mixing, I doubt very much if I could add anything that's new. There are about as many methods of automated mixing as you can imagine. All of them are good, and your selection would be guided by your own particular desires and pocketbook.

In our own particular case, we use the electro-mechanical method and find that it lends itself very nicely to a one-man operation for the selection and batching of ingredients. By using a continuous batch system—i.e., the collecting scale hopper, mixer, and the surge bin under the mixer—we find that we have adequate capacity. We also have one man in charge of premixes, and, as you know, this is an increasingly important part of the feed business today. These two men working together do an admirable job of mixing and quality control. Here again, we feel the industry cost standard is well within reason from a man-hour standpoint.

PELLETING: The next cost center is the one on pelleting, and this is probably one of the most interesting topics in feed manufacturing today. There are many, many facets to this subject, such as pelleting of complete feeds, pelleting of roughages, steam requirements, addition of liquids, reduction of fines, power costs, die wear, total capacities, etc. There are several more answers to each of these problems than there are problems, and I must say there will be a great amount of information available on these subjects at the 1959 Production School.

From a man-hour standpoint, I understand that there is quite a bit of work being done on an automatic pelleting setup, i.e., one which will automatically control the many variables, such as steam, temperature and liquid additives that are causing so many problems today.

Pellet mill manufacturers have made great strides in development of new equipment, and we have many mills that are producing three to four times the capacities of their predecessors of 10 years ago.

Coupled with the problem of pelleting is the problem of cooling and drying, reduction of fines, the classification and the handling in storage. Much work is being done on these, and I am sure it will be released soon.

PACKING: In the cost center of packing, we again find many variables.

In our own particular case, we find packing and warehousing are rather closely related. We have several bins over our packing scales and try to warehouse several of our feeds in bulk bins. Wherever possible, we try to pack directly from the bins to the customer's truck or into railroad cars. We developed our own automatic actuating device for our sewing machines operating in conjunction with an automatic thread cutter, so we use only one man operating each Thayer packing scale. The bag closes itself and moves on to the customer's truck, warehouse floor or outbound rail car by belt conveyor. Utilizing telescoping conveyors to load trucks and utilizing the driver of the truck, we thus have one man packing the feed. When we're using two of the packing scales, we have a third man who maintains a supply of bags and tags, check weighs and helps to keep the scales in operation. These one-man operations can operate in a range of 10 to 12 bags per minute each and do a very efficient job.

Here perhaps is an area where great improvement can be made, and I understand that there is quite a bit of development work being done which will enable one man to operate two or three, or more, packing units at one time. This would be made possible by merely filling the magazines of bag feeders with empty bags and having the automatic packing and closing operation operate by itself.

Even though there is a great trend towards bulk, it is my own feeling that certain feeds under certain conditions will not lend themselves to bulk handling, and it will be necessary that they be packaged in some form. Utilizing bag feeders and automatic sewing, this cost center can be improved.

WAREHOUSING: According to the figures obtained in the research program of the Production School, this cost center would account for approximately 30% of the man hours in a feed manufacturing plant. There are many variables in this field, and I'm

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BULLETIN 574—12 pages, describes horizontal and vertical storage tanks. Points out savings and is filled with photos of various installations plus description of auxiliary equipment.

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EQUIPMENT ONLY OR A COMPLETE SYSTEM

WISCONSIN FEEDER PIG PRICES CUT IN HALF

WADISON, WIS.—Wisconsin feeder pig prices have been cut almost in half in the last year, according to the Federal-State Crop Reporting Service, with the average price down from $14.17 a head a year ago to $7.98 this year.

The service said that the average price this year, based on Aug. 1 surveys, is 30% below the 1953-57 average and the lowest for any time since April, 1956. Figures are based on pigs averaging 8 weeks in age and 40 lb. in weight.

sure the man-hour costs will fluctuate with the variables.

One factor over which production people in many cases have no control is the volume and variety relationship, including bag sizes, physical forms of feeds and formula changes. Minimum production runs and management's constant vigilance over excess varieties will add some to control this variable.

Proper plant layout is extremely important in controlling man-hour costs in warehousing; however, as many of us have existing plants, it is not possible to completely rearrange them. A lot of research work has been done relative to the best methods of handling in a warehouse, and probably the most thorough is the work that was done for the Feed Production School by Richard Muther & Associates in their warehouse study in 1957. Where we have existing plants, of course, it is necessary that we adapt a method or type of materials handling that will best answer all of our problems. Some industries are undergoing exhaustive studies on the best method of unit shipping, whether or not to use wooden pallets, expandable pallets, paper pallets, all-corrguated four-way pallets, or where the product lends itself even to clamp truck handling. As I mentioned earlier, in our own particular plant, we are using a belt conveyor system, and have tried to lay it out in such a manner that all of our feed is fairly close to the belt conveyors.

As was brought out during the Production School, the least cost materials handling is no handling at all. While this is not always possible, good scheduling and planning can help to lower the materials handling cost, and proper utilization of manpower will also do a great deal.

MAINTENANCE: The final cost center discussed here is the one on maintenance. Obviously, as we have utilized more equipment and incorporated machinery to a greater extent, we have increased our maintenance problems. One of our greatest problems today in this area is the training of maintenance men to keep our automated plants in operation.

While we do not hold that the cost figures as brought out by the Feed Production School and the U.S. Department of Agriculture are the best available, we do feel that any operation using substantially more man-hours per ton will be in for some tough sledding.

In our great race to convert feed into food for our greatly growing population today, we will find many changes. A few years ago, the most fascinating word in the industry was "automation." And then perhaps the next most single overworked word was "integration." However, take another look. We have very efficient broiler factories, egg factories and commercial producers of pork and beef in operation today who are operating their highly specialized feed plants at less than one-half man hour per ton. In many of these, they not only are making the feed, but they are also feeding it automatically. In many cases, these factories are located very close to their source of feed and thereby are able to make additional savings in their cost of ingredients.

Take another look! Compare this with your operation—making a full line of feeds with many additives in small runs, and adding to this your higher labor rates and ingredient costs—see how you compare.

Henry Ford II recently said, "Nobody can really guarantee the future. The best we can do is size up the chances, calculate the risks involved, estimate our ability to deal with them, and then make our plans with confidence."

I believe that if we do this and take advantage of the men, machinery, materials, methods and money that are available to us, and do our very best job of planning and scheduling, we will be very pleased when we take another look.

Ogden Feed, Fertilizer Firm Sold for $290,000

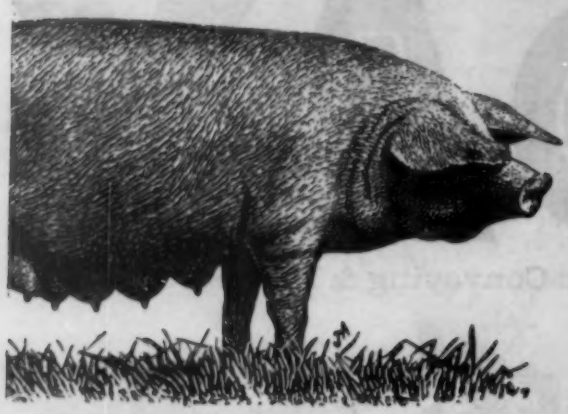
OGDEN, UTAH — A cattle feed mixing and a feed pelletizing plant, along with a fertilizer plant, were included in the $290,000 sale of the Western Livestock Order Buyers 78-acre feed lot west of here.

The transaction was confirmed recently by W. M. Early, general manager of the cattle division of the Beryl Investment Co., Somis, Cal. The plants and lot will be operated by Ogden Commercial Feed Yard, Inc., a subsidiary of the Beryl Wood Co.

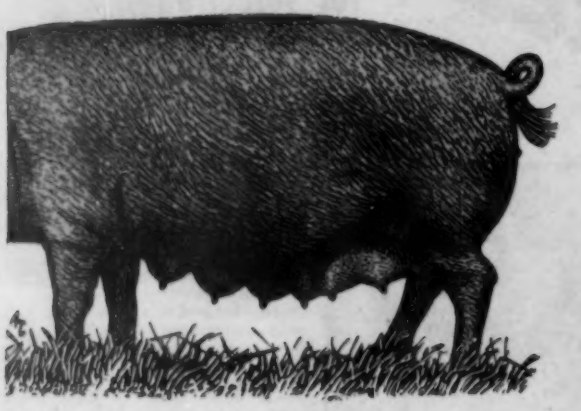
The facilities are temporarily closed for remodeling and expansion, according to Mr. Early.

New Plant in Operation

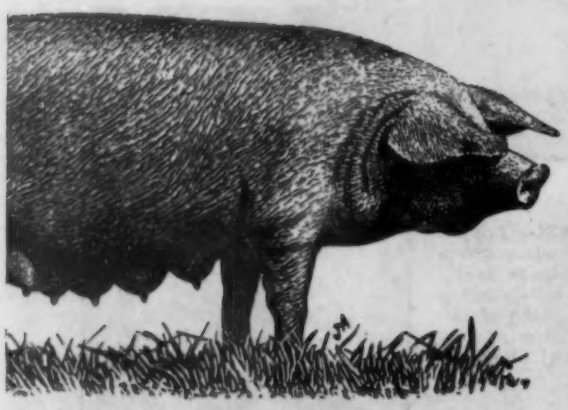
JEFFERSON, ORE. — Jefferson (Ore.) Seed Co., which offers feed grinding and mixing services in addition to having seed and grain processing facilities, has opened a new plant here. It replaces the old Marion-Linn Warehouse which burned to the ground in August, 1958. Feed processing equipment includes a 50 h.p. Prater Blue Streak grinder, a 2-ton Prater twin spiral mixer and a portable molasses mixing unit. Officers of the new firm are Jake Gilmore, Jefferson; Bill Moye, Albany; Lloyd Wright, Junction City, and Lee Wright, Portland.



Pigs Who Think *Prefer* Schenley SOLUDRI



Pigs like their mixed feed to include SOLUDRI, Schenley Distillers Dried Solubles*. They are smarter than you think — SOLUDRI's ingredients — high proteins, B-vitamins and minerals — will help the pig through its whole life-cycle, from growing pig to lactating sow. SOLUDRI's grain fermentation factors (the unknown growth factors) also break down and enrich cereal grain nutrients so that pigs can use the feed more efficiently.



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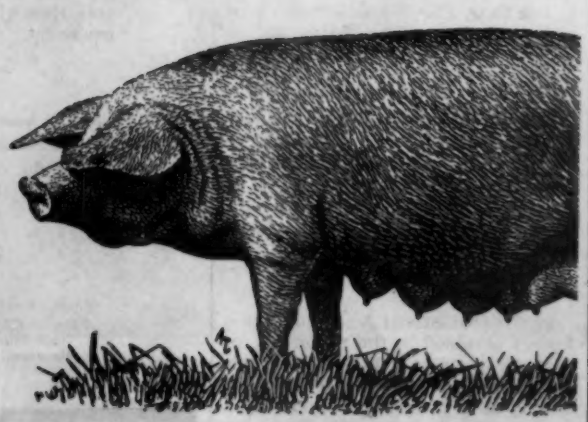

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Hay Wafer Machine 'Nearer Marketing'

DIXON SPRINGS, ILL. — An experimental field machine making its way through several miles of alfalfa windrows here recently at a University of Illinois experiment station added new vitality to the possibility that a successful and practical hay wafering machine "may be closer to being marketed than had been thought."

Prof. H. A. Cate of the Dixon Springs Experiment Station said the machine that showed the indicated promise was the same one that operated here last spring—"but it is so very much improved." He indicated that even further improvement can be expected within a year.

Prof. Cate reported that in a feeding test last winter at the experiment station here hay wafers proved to be superior to baled hay for putting gains on heifer calves. It took fewer pounds of wafered hay than of baled hay to make a pound of gain. And, wafers wasted less hay in the feedlot.

"As encouraging as the feeding test was," Prof. Cate commented, "a bigger advantage for wafers over bales seems apparent. The disc-shaped, 4-in., closely packed wafer requires only one third as much storage space as baled hay. It also costs less to truck and move and is easily adaptable to machine handling and elevating. And it is a cinch to grind preparatory to pelleting. In short, easier handling is the big advantage of the wafer over bales."

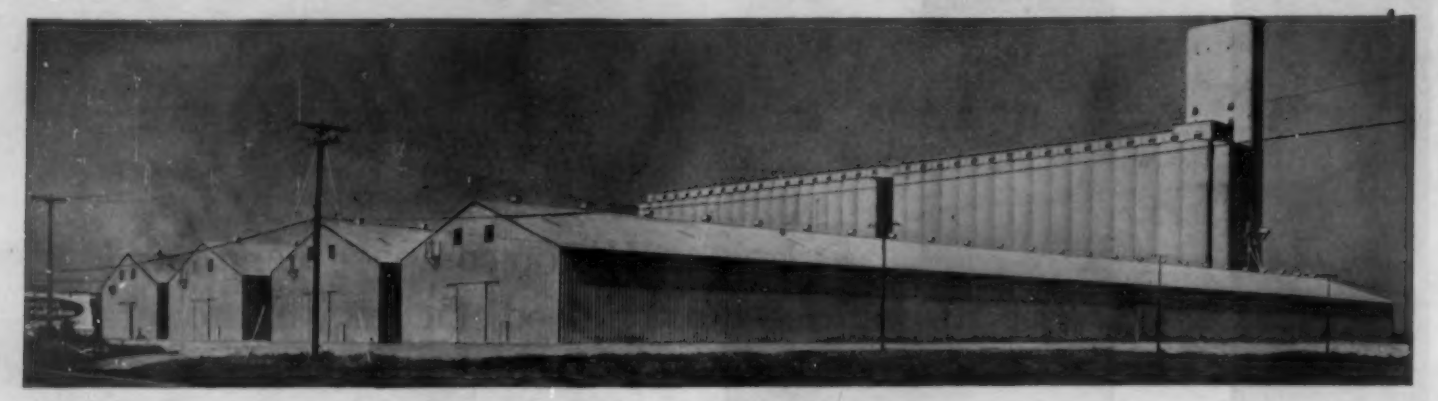
But, said Prof. Cate, hay wafers have some disadvantages, too. First, more power is required to make a wafer than a bale. About 10 times as much pressure is needed to form the wafer as is required to kick out the bale. Second, moisture is a more critical problem. Hay can quickly change from being too wet to too dry to make a good wafer.

S. C. Pellet Plant Now in Operation

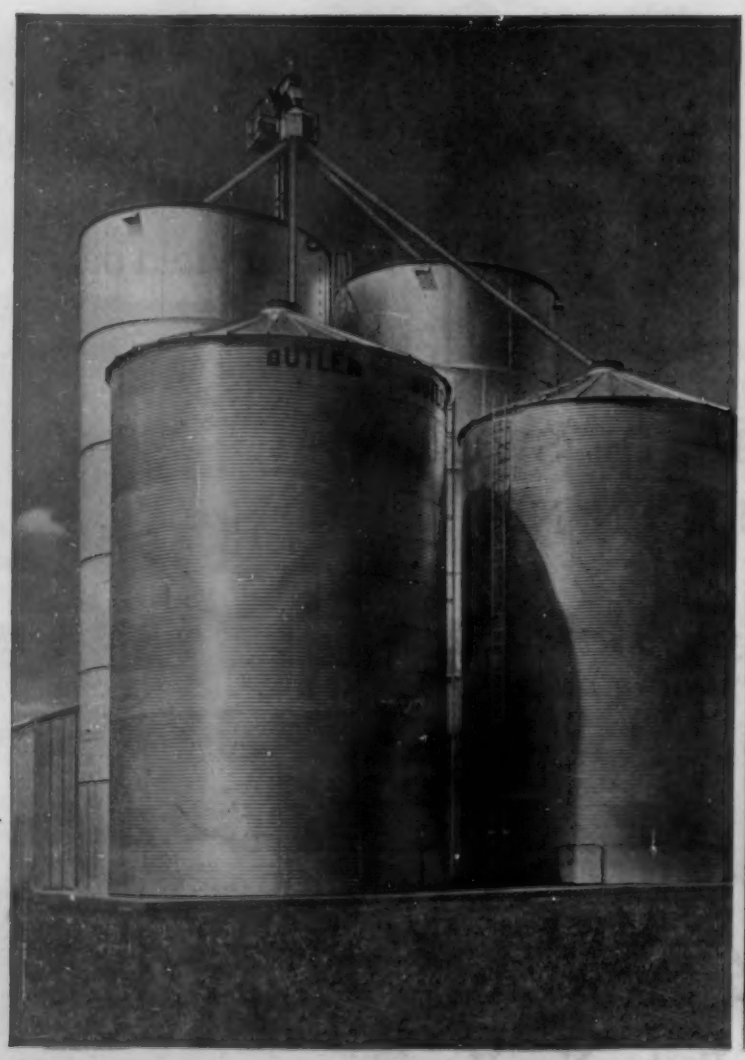
CLEMSON, S.C. — Coastal Farms, Inc., has built and begun operations of a new dehydrating and pelleting plant at Estill.

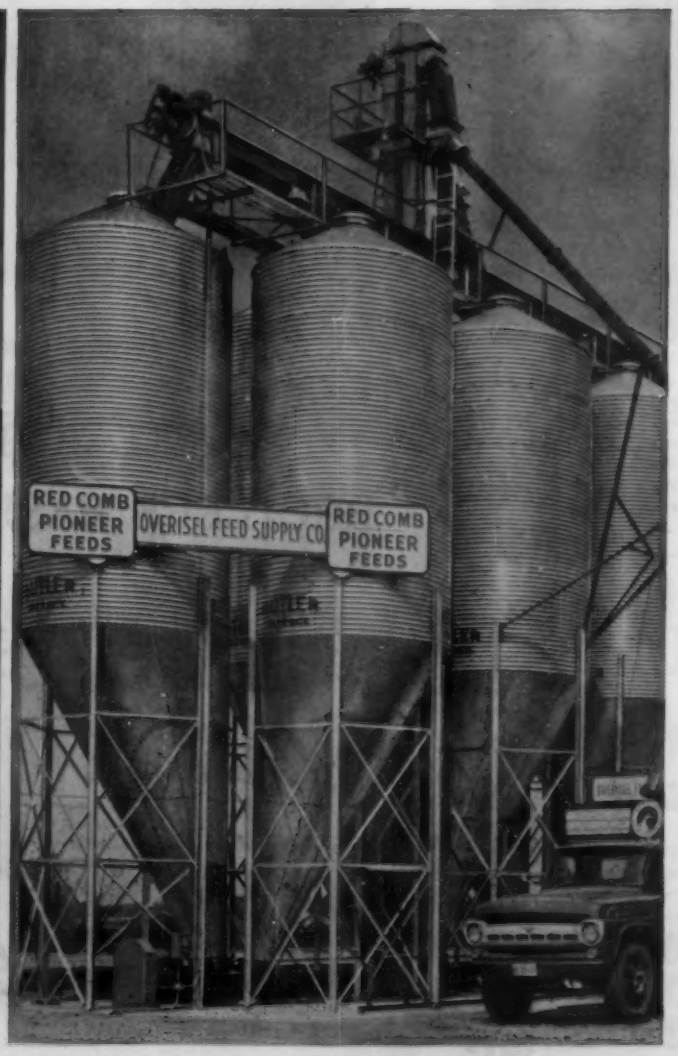
The owners of Coastal Farms, Inc., built the new plant to process livestock and poultry feed after studying the results of three years of pelleting work at Clemson College and in other states.

Dr. M. D. Farrar, dean of agriculture at Clemson College, who worked with the owners in planning the plant,



Name your storage problem has the structures and





said it is built on the same order as a smaller pilot plant now in operation at the Edisto experiment station, Blackville.

One of the plant owners, J. F. Wyman, Jr., said the plant was built "to produce a product that may replace alfalfa as a high quality feed supplement."

To Test Coastal Bermuda

Clemson's experiments at the Edisto station have dealt with determining if a high quality feed could be produced by pelleting Coastal Bermuda grass.

Crops to be processed at the new plant besides Coastal Bermuda will be Sericea lespedeza, winter rye and oats.

Dr. Farrar said the new plant has a capacity of from 30 to 40 tons of dehydrated grass or forage per day employing three five-man crews and operating on a 24-hour schedule. This schedule will prevail for 10 months each year, starting in the spring and running through the growing season, according to Dr. Farrar.

Coastal Farms, Inc., will sell its product wholesale to feed mixers. Their own mill plant for making mixed feeds may develop in the future.

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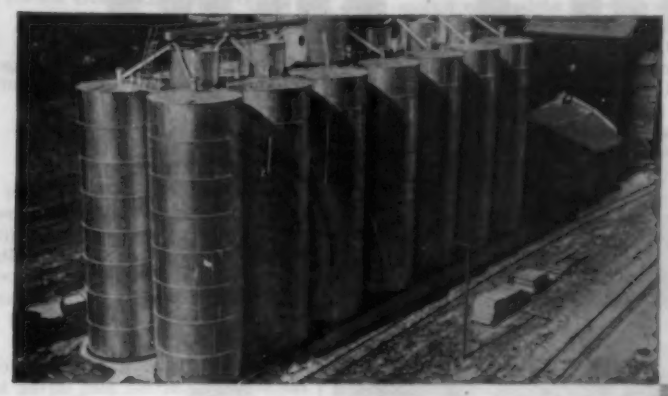

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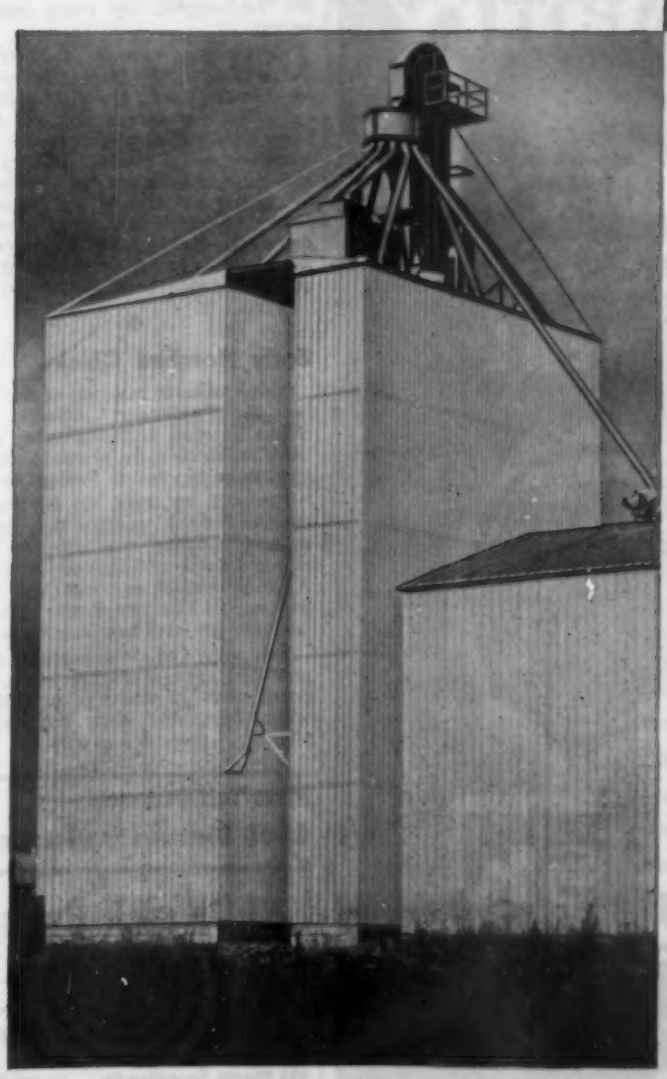

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Respiratory Disease

Earlier and more accurate detection of chronic respiratory disease (CRD) in breeder turkeys is now possible.

The technique tested by a group of University of California scientists involves the location of certain abnormalities of the air sacs of dead embryos or cull poults. A high number of diseased sacs indicates the presence of CRD. The only detection method used up to now had been blood testing of the breeders, which is considered time-consuming and expensive.

The Davis scientists emphasized that following the detection of diseased air sacs, the diagnosis of CRD should always be confirmed by agglutination tests and autopsy of a few of the reacting birds.

To reduce the possibility of egg-borne outbreaks of CRD, turkey raisers were advised to follow these principles:

(1) Breeders should be free from clinical signs of CRD.

(2) Breeders should show essentially the same reactor rate in two successive agglutination tests given one month apart.

(3) There should be no sign of active air sac lesions at autopsy.

(4) Egg production should be maintained at a satisfactory level.

(5) There should be no unusual early embryonic mortality up to the ninth day.

(6) Hatchability should stay high.

(7) High-quality poults should predominate.

(8) There should be no more than 2-3% incidence of air sac lesions in unhatched embryos and cull poults.

EDITOR'S NOTE: This week's column consists of poultry management, nutrition and health notes taken from research data presented during the recent national meeting of the Poultry Science Assn. at Iowa State University, Ames.

◆

More Hens Per Pen

Poultrymen can reduce feeder and floor space below previously recommended dimensions with profitable results, according to Dr. John Strain, Iowa State University poultry specialist. But only poultrymen with above-average records should attempt such space reductions, he said.

Although restricting floor space influenced production and laying house mortality in recent tests at Iowa State, extra hens in pens with greater bird concentration offset the loss in income per bird, Dr. Strain explained. Profit possibilities increased from 78¢ to $1.28 sq. ft. when floor space was reduced from about 3 sq. ft. per bird to approximately 1¾ sq. ft. for each hen. The tests also indicated that feeder space could be reduced from 4.8 in. per bird to 1.4 in. per pird with no apparent detrimental effects.

"But this doesn't mean that the standard recommendations of 3 sq. ft. of floor space and about 5 in. of feeder space per bird will be discarded," Dr. Strain commented. "The results are from only one series of tests and cannot be adopted by every poultry raiser.

"In the past, we've warned poultrymen, mainly on the basis of operators' experiences, not to crowd their chickens. These recommendations have been and still are satisfactory. But advances in the poultry industry are making it possible for some producers to raise more birds in a given space than ever before." Dr. Strain cited today's high-energy feeds and "bred-to-lay" hybrids as two of the most important advances.

◆

Early Hatched Chicks

Three years of research at the University of Missouri indicate that chicks hatched in February or June turn out to be more profitable layers than those hatched in September.

Research by Prof. Q. B. Kinder, department of poultry husbandry, showed hatching date affected both size and number of eggs laid by a hen. Average annual egg size was 24.4, 24.2 and 24.1 oz. per dozen, with size declining on later hatching dates.

February and June-hatched birds produced eggs averaging 24 oz. per dozen after 16 weeks of production, while September birds required 30

(Turn to page 41)

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CAN YOUR HOG PRODUCERS ANSWER THESE 3 QUESTIONS?

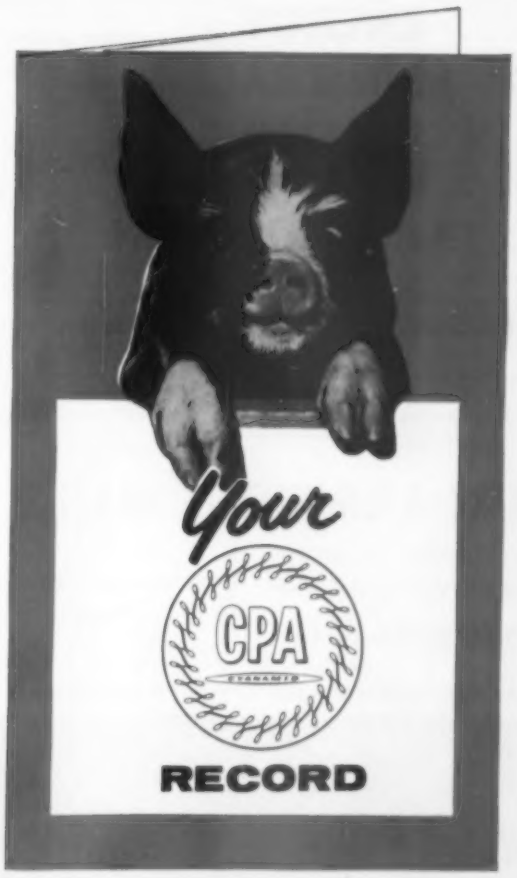
1. What was your cost per pig weaned last year?

2. How much feed did you use to produce 100 pounds of pork last year?

3. What was your net return over total costs last year?

If they can answer them, they're keeping records and know their value. If they can't, they need the unique, easy-to-use Record System described in the next three pages.

You, as a feed manufacturer or feed dealer, can now offer this Record System to your hog producers at no charge.



Now, you can offer a service long needed and wanted by hog producers

Offer CPA—Cyanamid Production Accounting. Your hog producers keep accurate records, put them to work reducing costs.

Cyanamid Production Accounting record is shown here with bills and sales receipts in handy pockets.

"Cyanamid and your feed manufacturer believe so strongly in the value of keeping records that they are bringing you your own personal CPA RECORD—a compact, convenient, easy-to-use record system."

This is the message your hog producers will be reading this fall in Cyanamid advertising in national, sectional and state farm papers.

Keeping accurate records for all stages of hog production has long been recommended and urged by feed manufacturers, extension specialists, bank farm advisers and leaders in the hog industry. This is the first time, we believe, that a complete record-keeping system has been offered *free* on a national scale. The CPA RECORD will be available only through feed manufacturers and feed dealers.

You can render a genuine service to your customers by offering CPA. Hog producers, by evaluating their records and acting upon what they show, can produce more hogs with the same labor and capital. They can wean more pigs per litter . . . produce more pork on less feed. They can plan production so that they sell on a higher market.

What CPA is

CPA RECORD is a 9″ by 14″ folder that can be used as a desk portfolio or opened out and used as a wall chart. It has handy pockets for keeping feed, veterinary and miscellaneous bills and sales receipts.

Most important in CPA are the record sheets themselves which are attached, at the proper time, to the master folder. There are two complete sets of these sheets to cover the records for all stages of production.

Record "A" is for posting feed during gestation and lactation. Space is provided for recording both purchased and home-produced feed.

Record "B" covers sow production at farrowing and weaning. Space is provided for a complete record on each individual sow.

Record "C" is a gestation-lactation summary. Here is where cost per weaned pig is figured.

Record "D" is for posting both purchased and home-produced feed during the growing-finishing stage. Space is provided for notes on death losses — and for dates and numbers of pigs started and finished.

Record "E" is for determining net return. To figure net return, farmers must know all costs in addition to feed. These costs are for pasture, veterinary services and supplies, labor, building and

CPA RECORD, with two record sheets attached, is shown as it appears when opened out.

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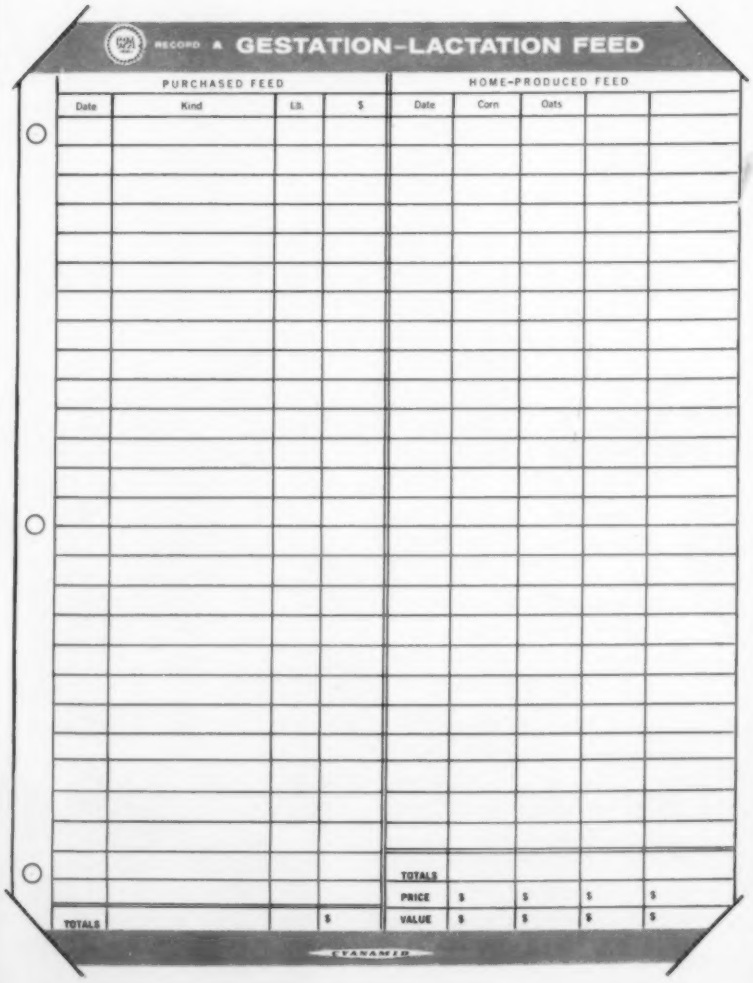


Get better sow performance by feeding AUREOMYCIN during the gestation, farrowing and lactation periods.

Keep starter pigs healthy and gaining fast on feeds containing AUREOMYCIN. Wean more pigs per sow.

Keep growing-finishing hogs on feed containing AUREOMYCIN all the way. Send more hogs to market.

equipment use, interest, taxes and overhead. Estimates of these costs, based on a study made by a leading midwest university, are supplied. These can be used as a basis of comparison or for estimating net return.

CPA is designed to be equally usable by the producer of feeder pigs, the purchaser of feeder pigs, or the man with a complete operation. Ideally, a set of records should be kept for each group of sows due to farrow at a given time and should be started when the sows are bred. CPA is flexible enough, however, to allow the producer who is farrowing continuously to keep annual records.

How AUREOMYCIN® pays

Many hog farmers who have kept records over a period of years know that AUREOMYCIN pays off when fed at every stage of hog production.

Recent controlled experiments conducted on 7 farms in Iowa involving 176 sows and their litters totalling 1523 pigs, revealed remarkable results when AUREOMYCIN was fed to sows and pigs from breeding to market.

There was an extra return of $3.65 for each $1 invested in AUREOMYCIN.

In these controlled experiments one group of sows and their litters were fed AUREOMYCIN. Another group of sows and their litters received no AUREOMYCIN. Results showed 9 more pigs weaned per 12 sows from the group fed AUREOMYCIN. That's a *big extra litter* and a significant profit picture for any hog farmer.

After weaning, the pigs were continued on the experiments through the growing-finishing stage — one group on AUREOMYCIN, another group without AUREOMYCIN. 10 more pigs were marketed per 12 litters from the group fed AUREOMYCIN. At market, that represented an extra return of $356.48 from one farrowing of 12 sows.

Combine this program with CPA RECORD keeping

When your hog producers follow the multi-stage swine raising program with your good formula feeds containing AUREOMYCIN, the CPA RECORD will show that hogs put on gains at the lowest possible cost.

We're urging hog producers to see their feed manufacturer or feed dealer for the CPA RECORD and for good formula feeds containing AUREOMYCIN for the multi-stage program – gestation, farrowing, lactation, starting, growing and finishing.

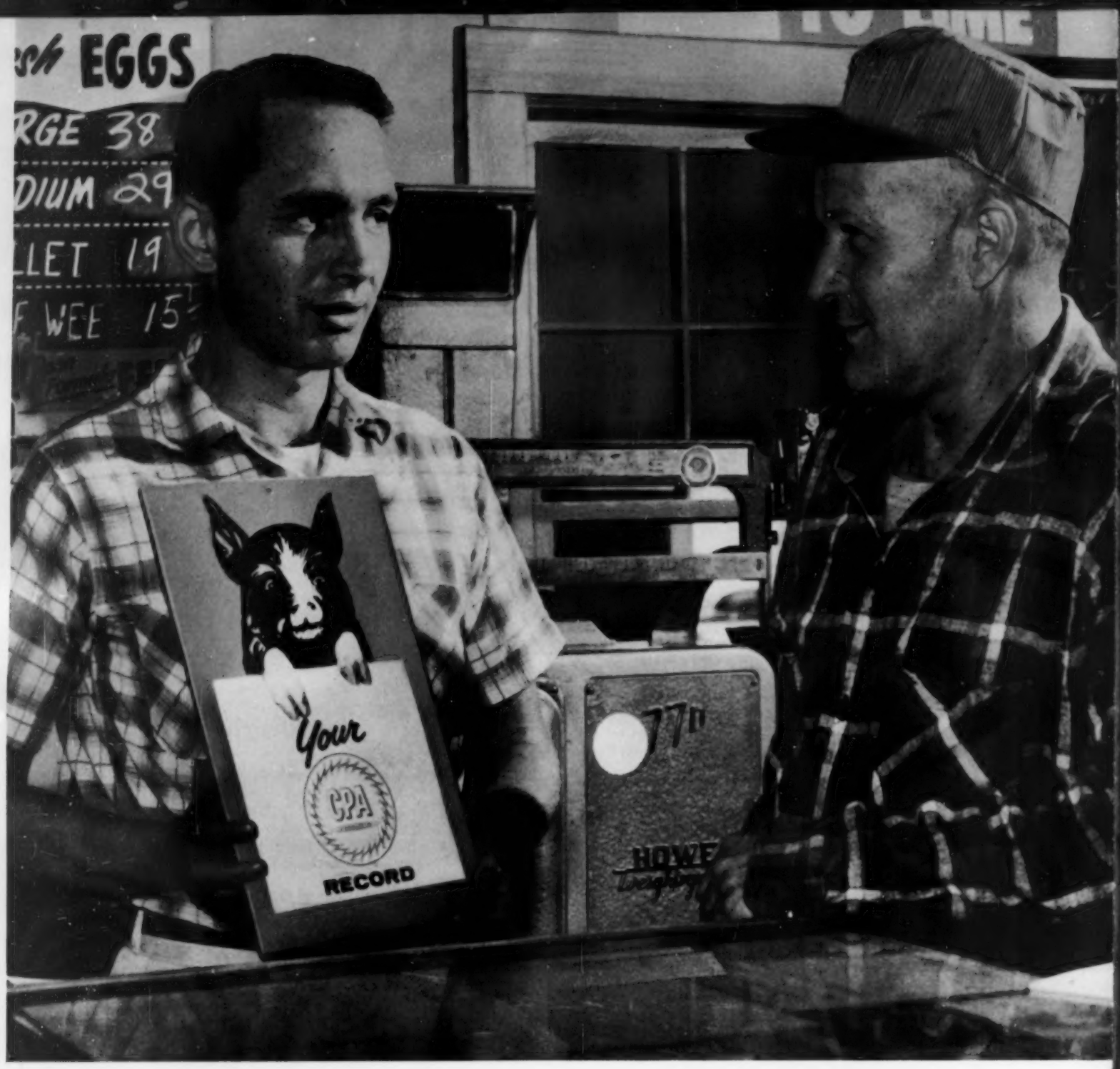
On the back page you will find full details on how to get your supply of CPA RECORDS.

*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.

TION ACCOUNTING
SWINE

RECORD ■ SOW PRODUCTION

Sow No.	FARROWING Date	FARROWING No. Born Alive	FARROWING No. Born Dead	FARROWING Birth Weight	WEANING Date	WEANING No. Weaned	WEANING Litter Weight	Date Vaccinated	NOTES



Customers will see or write you for their CPA RECORD

Your customers are being told—in national advertising in the farm magazines shown below—to get their CPA RECORD from their feed manufacturer or feed dealer. A coupon has been included for their convenience in writing to you. Feed manufacturers and feed dealers are urged to contact a Cyanamid field representative—or to write direct to Cyanamid—for full details on CPA and how it can be used to advantage.

American Cyanamid Company, Agricultural Division, New York 20, New York.

CYANAMID

AUREOMYCIN
IN FORMULA FEEDS

NO COLLECTORS AFTER $229,605 DEBT

SANTA FE, N.M.—Ranchers and farmers still owe the state of New Mexico $229,605 for hay and other feeds, but no attempt is being made to collect it.

The debt was incurred several years ago under the 1956-57 federal-state drouth relief program. Feed was distributed under a certificate plan to ranchers and farmers under a plan whereby the federal government would pay 75% and the state 25%. But at the end of 1956, the state's participation halted when emergency funds ran short. Subsequently, the State Supreme Court stated in an opinion dated May 8, 1957, that such payments were unconstitutional because public funds cannot be donated to private individuals.

The decision left the recapture of the payments up to state authorities. An attempt was made in the 1959 legislature to forgive the debts but it failed to pass. Since then, various departments of the state government have shrugged off the unpopular task of billing the recipients for the money. A very recent survey showed that no plans are underway now for the collection.

After the state stopped its payments, the federal program continued to April 23, 1957. Federal contributions totaled $1,737,822.81.

weeks of production to attain this size level.

Yearly egg production on a hen-day basis (total number of eggs laid divided by average number of hens housed during the laying period) was 220, 210 and 210 for the respective February, June and September hatches. On a hen-housed basis (total eggs divided by number of hens initially housed), production was 208, 192 and 188.

Prof. Kinder reported little difference in mortality rate, but culling of birds which had stopped production was much higher in the June and September hatches. All three hatches tended to go out of production during the June-to-December period regardless of how long they had produced.

The February and June hatches proved to be the most profitable when the factors of egg numbers and egg size were combined with seasonal market prices. Prof. Kinder reported that the two early hatches had a labor income of $1.61 and $1.20 per bird, respectively, compared with 94¢ on the September hatch.

In addition, the study indicated date of hatch definitely affects the length of time that egg-strain birds should be kept for profitable production. Early-hatched birds tended to have the longest laying life.

Storage, Drying Plant

TOPPENISH, WASH.—Grain Dryers & Storage, Inc., has started expansion and remodeling activities leading to operation of a $140,000 corn storage and drying plant.

When running at full capacity, the local operation will be able to handle 10,000 tons of aerated corn for storage, and will be able to dry between 400 and 450 tons daily.

The firm recently purchased the former Benz brothers warehouse here.

Cable Address: Parrheim
P&H
GRAIN •
FLOUR •
FEEDS •
Domestic & Export
PARRISH & HEIMBECKER
LIMITED
Export Office — TORONTO, CANADA
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Robert Brady Joins Merck Sales Force

RAHWAY, N.J.—Robert M. Brady has been named an animal health sales representative to serve southern Missouri and Arkansas for the chemical division of Merck & Co., Inc., Rahway, N.J.

R. M. Brady

Mr. Brady, a native of Springdale, Ark., will report to C. E. Wall, St. Louis, manager of Merck's south-central agricultural region.

He received his bachelor of science degree in business administration (marketing) from the University of Arkansas in 1958. He was previously with a veterinary supply company in Arkansas.

He will work out of Springdale.

DOUBLE-BARRELLED PROTECTION!
The Douglas #33 Respirator

For dusting or spraying with *light concentrations* be sure you have the protection of this easy to use respirator. Lightweight, flexible molded rubber facepiece forms a gas-tight seal against your face—yet slips on and off without discomfort. For outdoor use of these Douglas products: Tetrafume, Tetrakil, Tetraspot, Tetrakote, Topkote 77.

When spraying *heavy concentrations* indoors—Tetrafume, Tetrakil, Tetraspot, Tetrakote, Topkote "77", Special Mill Spray, or "88" Improved Farm Bin Spray—use the Douglas #44 Fullface Gas Mask. The "All-Vision" Facepiece gives unobstructed vision. Harness allows ample working freedom . . . goes on and comes off easy. Both units available NOW at your local elevator or your nearby Douglas dealer.

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Douglas Chemical Company – 620 East 16th
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TRIUMPH CORN SHELLERS

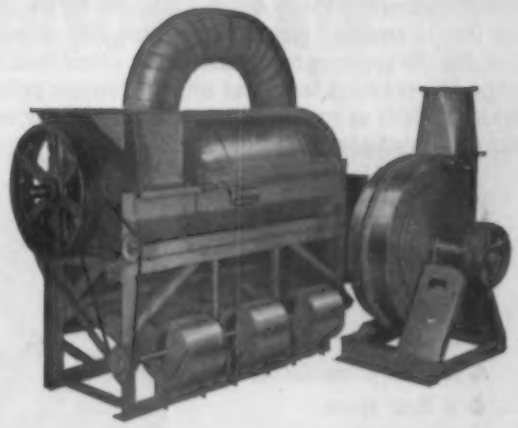
shell, separate and clean the corn; remove cobs, husks and dirt

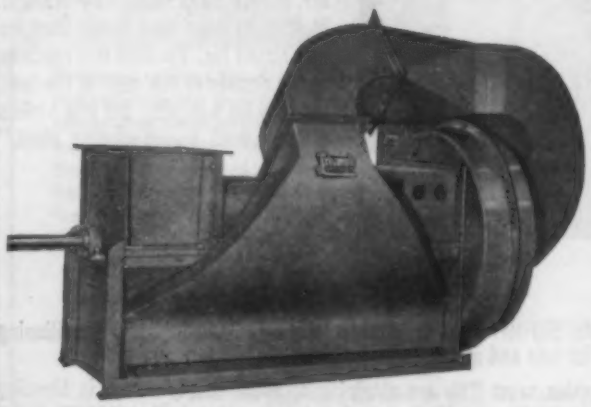
assure fast, efficient, dependable, low cost operation

Improved **TRIUMPH No. 1200* Corn Sheller**

Complete system including sheller, cleaner and blower. The original and undisputed best. New, improved model assures even less costly operation; better cleaning; easier access to all parts; and more automatic operation. Highly efficient even on high moisture corn, or corn full of husks. Exceedingly compact. Requires little space. Easily adapted to any plant arrangement. Few moving parts. Fully patented. Capacity 40 to 50 tons of machine picked ear corn per hour. Send the coupon today for complete description and specifications!

*U. S. Patent No. 2,754,827.





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All the patented, proven features of the larger No. 1200 system, but somewhat smaller. Rugged, sturdily built. Fully meets all requirements of grain elevator service. Highly efficient on high moisture corn or corn full of husks. Low intake height. Sheller, cleaner and blower driven with a single motor simplifying installation and operation. Screen, shelling plates and all other internal parts readily accessible. Capacity 30 to 40 tons of machine picked ear corn per hour. Send the coupon today! Get full details and dimensions.

TRIUMPH Double Roll Ear Corn Crushers

Only 10" high. Mounts easily on feed hopper of either a No. 1200 or No. 900 Sheller. Prevents entrance of rocks, tramp iron or other foreign materials. Large capacity. Highly efficient. Double shaft design permits one shaft to operate even though pins in other sheave are sheared. Easily installed. Driven from the sheller. Requires no additional motor. It'll save you time and money! Get full details. Send the coupon today.

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Send full details about:—
☐ No. 1200 Sheller ☐ No. 900 Sheller ☐ Ear Corn Crushers
☐ Have an engineer survey my plant. (No cost or obligation to me)

Name_____Title_____
Company_____
Address_____State_____

JOE BROOKS

BY AL P. NELSON

The Fork Lift Saves Labor

The supply salesman got out of his car, briefcase in hand, just in time to see Joe Brooks' fork lift approach a garage door setup at one corner of the big salesroom. A big crate carried neatly by the fork lift, like a tray of dishes in a restaurant on the hand of a college athlete, was being transported into the salesroom, via the overhead garage door. Butterball Barlow, young and pimply faced, was the lift operator, and he delighted in maneuvering the machine.

Butterball drove the fork lift into the salesroom and gently deposited the big wooden crate at a spot on the floor where Joe Brooks indicated.

"That's it, Butterball!" Joe called.

There was a pallet under the crate, but this Butterball left as he neatly backed out, fork prongs protruding. Then the overhead garage door came down.

"Say, Joe," said the salesman who called on the feed dealer regularly. "I knew you used a fork lift in your feed warehouse, but what the heck is this—using it to bring heavy objects into the salesroom?"

Joe chuckled. "Well, Tom, it's like this. After we mechanized our mill a couple years ago, we started looking for more ways to save labor and time. Then I took on bulk milk tanks and farm freezers and things like that. We decided to use the fork lift to bring those items from the warehouse into the salesroom, and we had to do it from the outside. So we cut this overhead garage door into the salesroom, built a small ramp and now we have no trouble getting heavy objects into the salesroom."

The salesman smiled. "You certainly are always looking for good ideas, Joe. And you usually put those to work which you think can help you."

"I'd be a fool if I didn't," Joe came back. "You salesmen tip me off to a lot of them. On this fork lift, we make our own pallets in spare time. We use scrap lumber. Get a lot of it with appliance crates, and pick up a lot more here and there at low prices. On this bulk tank, after it's uncrated, we'll have usable lumber. We'll have to lift it a little by hand to work out the pallet if we want to, but sometimes we let it stand right on the pallet. Easier to move when we sell it and load it on the truck."

"The emphasis in the feed business is on more efficiency in handling merchandise," said the salesman. "What a far cry from the old days when hand labor was the big item."

"Since you are interested in the truck lift, let me show you another idea," Joe said. "We got this idea from a salesman who visited the Russell Grain Co. down in Hilliards, Ohio. After he told me about it, I got excited and made a trip down to Hilliards to meet John Russell and his brother, Nelson. They are a couple of keen young merchandisers. Let their fork lift idea speak for itself."

More Lift Uses

Joe took the salesman out in back near some grain silos. "I have several storage locations, Tom, and sometimes we get mighty crowded. There isn't always time to load or unload certain types of merchandise from trucks right into the warehouse. So, like Russell Grain Co., we built this fork lift ramp. With the use of it, the fork lift can go right up into the truck with a pallet loaded with merchandise if we desire. Or it can go right up and unload merchandise if it's on pallets. Then we can take that merchandise right where we want it in the warehouse and stack it. One man can move and store a lot of merchandise in one day."

"I can see that," Tom said, "but what if the merchandise comes in by truck and is not on a pallet? What do you do in that case?"

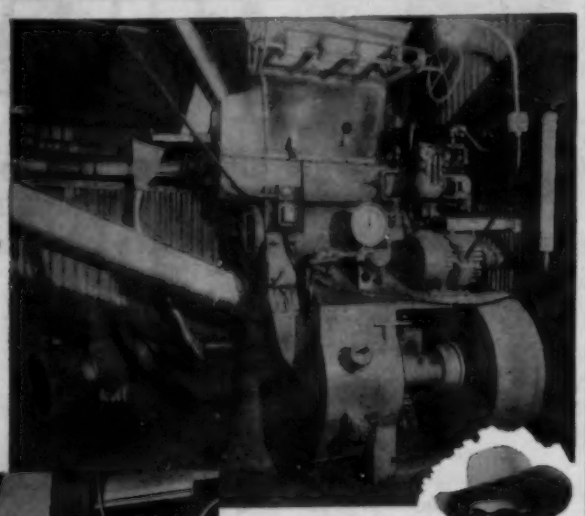
Joe smiled. "We bring the fork lift up the ramp with an empty pallet. We stick that pallet right under the nose of our employee lifting the merchandise. He can load the pallet very easily. As we work into the truck, we have spare pallets around, so the unloader can be piling sacks on spare pallets while the fork lift is taking one load to the warehouse and putting it where we want it."

"Very good," commented Tom. "I see where you are making good use of that fork lift. Sorry I don't sell them. Maybe I could sell you another, because your business is growing."

Joe grinned. "Well, so far as I am

Proving the Versatility and Performance of

Wenger Multi-Duty PELLET MILLS



Although engineered primarily as a hard pellet mill, the Wenger Multi-Duty is exceeding expectations in every field of feed processing. For producing hard pellets (with or without liquids) Wenger blended mash feeds, and with Hi-Molasses pellet extruder available as an optional extra, the Multi-Duty represents the greatest advance in feed processing in many years.

FOR ECONOMY—

- in total equipment cost
- in man hours per ton of production
- in operation
- in liquid proportioning
- in floor space
- in installation costs
- in minimizing contamination hazards

No other pellet mill is the equal of the Multi-Duty.

Write for Catalog

Mr. Ray Steel, Vice Pres.
Indianola Operations,
Honeggers', Inc.
Indianola, Iowa

Honeggers' 100 HP Multi-Duty Pellet Mill which is used in producing both hard pellets and Hi-Molasses pellets in their new mill at Indianola, Iowa.

Mr. Steele says "Our new Wenger Multi-Duty does even better than we had hoped for. I'm sure this machine is the answer to the need in the feed industry for a smaller, but still a more efficient feed manufacturing plant."

Mr. Larry Jenkins, President
Texas Feed & Cattle Co.,
Kilgore, Texas

Wenger's 100 HP Multi-Duty Pellet Mill with built in liquid conditioning feeder for fats and molasses is the heart of their fine new mill.

Mr. Jenkins says: "We are obtaining optimum quality control in blending liquids in our Wenger Multi-Duty Pellet Mill with excellent tonnage and a minimum of fines."

Mr. Wendell S. Haley, Manager
Ashland Cooperative Exchange
Ashland, Kansas

Ashland is using a new Wenger 50 HP Multi-Duty Pellet Mill to make Hard Pellets and Hi-Molasses Pellets as well as molasses meal feeds.

Mr. Haley states that, "In my opinion the Multi-Duty is tops in performance and the Wenger Company is tops in service and 'follow thru'."

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Animal Nutrition and Feed Production Consultant

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IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR-FOOTED ANIMALS

concerned, it has paid for itself by labor and time it has saved. I wouldn't be without it. Now take a trip with me over to the spot where our traveling feed store on wheels is being loaded."

"By fork lift, too?" The salesman seemed surprised.

"Sure thing. I got this traveling feed store idea from a visit I made last summer through upper Wisconsin where I visited the Wisconsin Milling Co. at Menomonie. Robert Pierce, the owner, has three mobile mills—we have one—and he sends along a combination supply truck and feed store with each mill."

"He does!"

Joe nodded. "We are using his idea and our mobile route sales have increased, but we place our truck items on pallets. We can load the truck heavier that way, create mass displays in the trucks, which promote more buying. When the truck comes in at night, the warehouse boys can check what's sold and reload by the time the driver goes out the following morning. We even have some pallets with farm store displays on them, carrying seasonal merchandise, such as insecticides, sprayers, etc."

The salesman was duly impressed. "Joe, there can't be any other ways in which you use your fork lift, can there?"

Joe laughed. "Well, we have used it on several occasions on the Fourth of July and other parades. Everyone likes to see it. One year we dressed up Milt Peters as a blackface comedian and had him sit cross legged on a pallet containing bags of our feed. He threw candy kisses to the kids."

"The fork lift sure is good for many things, Joe."

Joe smiled. "You are a darn good listener, Tom. You've been patient while I spouted off about the fork lift. I could take just as much time raving about my efficient mixers, my hammermill, my pellet mill and my mobile unit, but I won't, essential as these things are to my operation. But now, I am going to give you some time to tell me about everything in your line. Let's go over to Happy's and have some coffee and sweet rolls on me. We can have quiet there, and you can give me the works. I might buy one or two things from you."

Bulk Transport Sales Engineer Reassigned

RIVERSIDE, CAL.—J. T. (Jim) Adkins, sales engineer for Food Machinery & Chemical Corp. bulk transport systems, has been reassigned to serve the feed manufacturers in the south Atlantic states.

J. T. Adkins

According to D. R. Copple, product sales manager, "This reassignment represents an expansion of sales coverage for FMC's bulk transport systems which now utilize the new supply facility at Hoopeston, Ill., in addition to the manufacturing center at Riverside, Cal.

Before joining FMC several years ago as a sales engineer, Mr. Adkins was a territory manager for Burrus Mills. His new sales headquarters will be at Charlotte, N.C.

CHARLES H. HUBBELL
CONSULTANT
Feed Formulation
and Research
Phone—Wabash 2-9085
53 W. Jackson Blvd. Chicago 4, Ill.

Plant in Texas Sold

LAMESA, TEXAS—The Clary Poultry & Egg Co. feed mill and egg processing plant have been sold to G. K. McDonald, who is operating it under the name of Farm Supply & Service Co.

Clary Poultry & Egg Co. built the plant about two years ago to be used in servicing the company's broiler and egg producers of the area. These customers are now being serviced out of Lubbock.

Mr. McDonald is the largest poultryman in the area, and is currently keeping about 22,000 laying hens. The feed mill is being used almost exclusively to mix feed for the flock.

FEED STORE

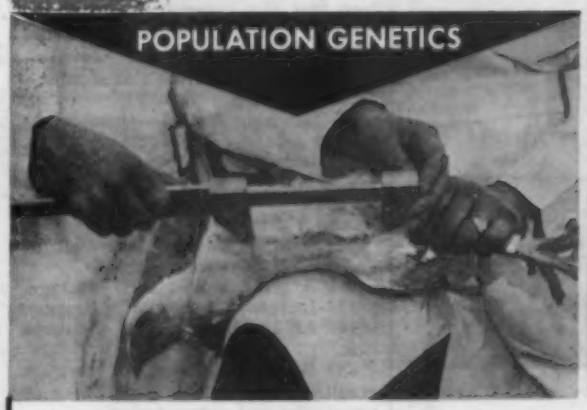
JASPER, ALA.—Ellard's Seed & Feed has opened a second store in Jasper. Dewey George is manager of the store.

Report Shows Ranking of 10 Leading States in Poultry, Livestock Production

ST. PAUL—A table showing the ranking of the 10 leading states in the U.S. in poultry and livestock production appears in a recent publication of the Minnesota state-federal crop and livestock reporting service—"Minnesota Agriculture—1958-1959." The table is as follows:

	Rank in Livestock and Poultry, Ten Leading States									
Item	1	2	3	4	5	6	7	8	9	10
All cattle on farms Jan. 1, 1959	Texas	Iowa	Neb.	Kansas	Wis.	Mo.	Ill.	Cal.	Minn.	S.D.
Milk cows on farms, Jan. 1, 1959	Wis.	Minn.	N.Y.	Pa.	Iowa	Cal.	Ohio	Mich.	Mo.	Ill.
Milk produced, 1958..	Wis.	N.Y.	Minn.	Cal.	Pa.	Iowa	Mich.	Ohio	Ill.	Mo.
Hogs on farms, Jan. 1, 1959	Iowa	Ill.	Ind.	Mo.	Minn.	Ohio	Neb.	Wis.	Ga.	S.D.
Pigs saved in 1958 ...	Iowa	Ill.	Ind.	Mo.	Minn.	Ohio	Neb.	Wis.	S.D.	Ga.
All sheep on farms, Jan. 1, 1959	Texas	Wyo.	Cal.	Colo.	Mont.	Iowa	S.D.	Utah	N.M.	Ohio
Horses and mules on farms, Jan. 1, 1959	Texas	N.C.	Ky.	Miss.	Tenn.	Ala.	Ga.	Mo.	La.	Va.
Chickens on farms, Jan. 1, 1959	Cal.	Iowa	Pa.	Minn.	Ill.	Texas	N.J.	N.C.	Ohio	Mo.
Chickens raised in 1958	Iowa	Cal.	Minn.	Pa.	Ill.	Ga.	Wis.	N.C.	Mo.	Ind.
Eggs produced in 1958	Iowa	Cal.	Minn.	Pa.	Ill.	Wis.	Ind.	N.J.	Ohio	Texas
Turkeys raised in 1958	Cal.	Minn.	Iowa	Va.	Texas	Ohio	Mo.	Ind.	Utah	Wis.

2 phases of genetics
produce the
PETERSON MALE



Peterson utilizes the science of *Population Genetics* to continuously improve the Peterson Male. Thousands and thousands of detailed records are being taken at all times. These figures provide the information needed to select breeders on a performance basis. The constant goal is to select top individuals from outstanding families . . . as determined by the records.

Peterson is the first male breeder in the broiler industry to add an *Immuno Genetics* division to its Research Department. This group is classifying the blood-type genes in each bird. These blood types are being compared for performance characteristics. Peterson will use this research as a more exacting tool in the scientific selection of superior mating combinations.

"Peterson Research Means Continuous Progress"

Peterson Genetic Research is a five-point program of *balanced breeding* to bring benefits to every phase of the broiler industry . . . livability and fertility for the flock owner . . . hatchability for the hatcheryman . . . growth and conversion for the grower . . . carcass quality for the processor . . . and a better meat value for the consumer.

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Peterson
MALE

Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Effect of Pelleting on the Chemical Composition and Digestibility of Alfalfa Meal

● I. L. Lindahl and P. J. Reynolds, USDA, Beltsville, Md.; Journal of Animal Science, Vol. 18, No. 3, August, 1959, pp. 1074-1079.

ABSTRACT AND COMMENT

Dehydrated alfalfa meal was processed as follows:

(1) Original alfalfa meal containing no added fat.

(2) Pelleted with use of steam—¾ in. size.

(3) Pellets reground to fineness of original meal.

Crossbred wethers two years of age were used in a Latin square design (two 3 x 3 orthogonal squares) metabolism experiment to determine the digestion coefficients of the various meals. The pelleting process resulted in an increase in the ether extract—the average absolute increase resulting from pelleting being approximately 1.13%, mostly due to non-fat ether extract soluble materials. This increase is probably due to partial cellular rupture during the pelleting process, thus permitting more thorough extraction of ether soluble materials. Likewise, probably due to similar causes, the crude fiber content of the pelleted material was reduced slightly.

The apparent digestion coefficients demonstrated that the pelleting process resulted in a highly significant increase in the digestibility of the ether extract, but had no effect on the digestibility of dry matter, crude protein, crude fiber, NFE or gross energy.

These authors state that it is dubious that the physical state of the material accounted for the changes in digestibility, but that they resulted more likely from the pelleting process itself. The calculated TDN content of the meal, pellets and ground pellets was 55.4, 57.1 and 56.9%, respectively. Since there was no difference in the digestibility of the total energy in the meal and its pellets, the difference in TDN is merely an artifact resulting from the fact that the greater ether extract content of the pellets is multiplied by the conventional factor 2.25.

It is therefore difficult to attribute increased gain or feed efficiency in lamb fattening diets to changes resulting in the digestibility resulting from the pelleting process.

The authors state that increased productivity from pellet feeding may be due to:

(1) Increase in the retention of digested nutrients.

(2) A reduction in feed wastage.

(3) Increase in rate of digestion.

(4) An increase in feed consumption.

(5) Better utilization of nutrients resulting from a balanced intake of roughages and concentrates.

(6) Or, a combination of the above factors.

On the basis of what we know now, it seems reasonable to postulate that the response of roughages in the pelleted form is due chiefly to the fact that the fine grinding allows for a faster rate of digestion, and the pelleting allows for increased rate of consumption and a reduction of feed wastage.

It is dubious in my opinion that any actual increase in retention of digested nutrients occurs or that there is much better utilization of nutrients in all roughage diets. The true answer awaits more research. It should also be pointed out that these ideas probably apply only to those diets in which a large or the only portion of dietary nutrients is furnished by roughage. If concentrates form a large share of the diet it is very possible that other factors such as dietary balance become relatively more important in performance.

●

Influence of Triiodothyronine on Feedlot Performance and Carcass Characteristics of Growing and Finishing Swine

● H. D. Wallace, C. E. Norris, G. E. Combs, G. E. McCabe and A. Z. Palmer, Florida Agricultural Experiment Station; Journal of Animal Science, Vol. 18, No. 3, August, 1959, pp. 1018-1024.

ABSTRACT

Three experiments involving 147 mixed breed hogs were conducted to evaluate a "new" thyroid-type product (Sodium Triiodo - L - thyronine, Merck & Co.) as a feed additive to growing and finishing swine rations.

Weanling pigs were fed the compound at levels of 0, 25, 50, 75, 125, 250 and 500 mg. of triiodothyronine per ton of feed throughout the growing and finishing period. Certain groups were also fed 50 mg. of the material commencing at 110 or 150 lb. liveweight.

The experimental rations used were of the conventional corn-soybean oil meal type containing 15% protein in the first experiment, and 14% protein in the third. In the second experiment, 14 and 21% protein levels were also evaluated in addition to the various levels of feed additive. Pigs were removed as they reached approximately 190 lb. market weight.

The results clearly show that little effect was observed by the use of the thyroid active compound. In only one case, at the 50 mg. level in one experiment, was a significant improvement in gains noted. The supplement was without effect on carcass measurements, size of pituitary and adrenal glands, and appeared to be unaffected by various protein levels in trial 2.

Levels of 125 mg. per ton or higher definitely reduced feed efficiency. Pigs fed the 14% protein ration in trial 2 gained faster, converted feed more efficiently, gave higher dressing percentages and were thicker in the backfat than those comparable pigs fed the 21% protein ration during the growing and finishing period.

COMMENT

The search for new feed additives goes on, but this particular one doesn't seem to answer to increasing feed gains or promoting feed efficiency! Although thyroid-active compounds may promote gains in very young pigs in extremely small amounts, it is extremely dubious in my opinion whether they will ever be worthwhile additions to hog rations, at least in the near future under present conditions of feeding and management. (Also, see Baxter et al, 1949, Journal of Animal Science, Vol. 8, p. 307.)

FIRM INCORPORATED

LINDEN, CAL.—The Beckley Commercial Feed Yards has been incorporated in Linden at an evaluation of $75,000. Garrett W. Beckley is principal owner of the firm, located near Stockton. An associate firm is the Beckley Feed Co., capitalized at $25,000.

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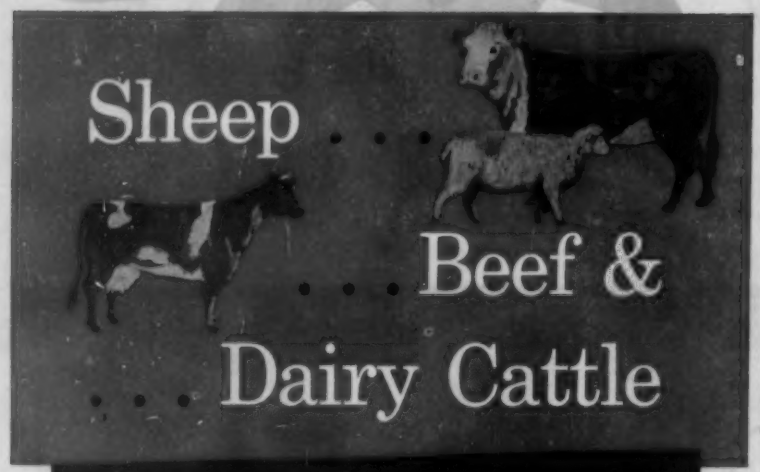

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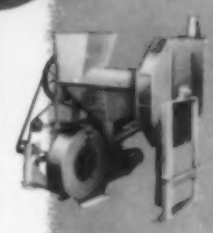
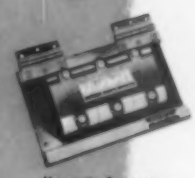
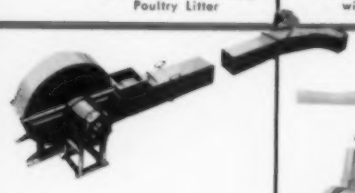
Vertical Feed Mixer ½ to 5 tons



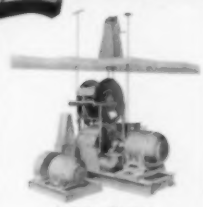
Corn Sheller with blowers for grain and cobs



Magnetic Separator protects mill machinery



Forced Air Carloader with motor or belt drive

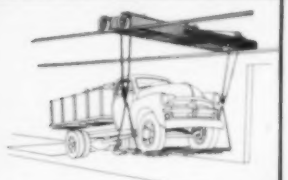


Remote Change Hammermill

Twin Molasses Mixer

Corn Scalper with or without air cleaner

Chain Drag in double and single geared types



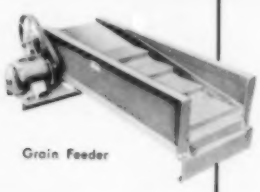
Electric Truck Hoist cuts handling costs

Portable Screw Elevator

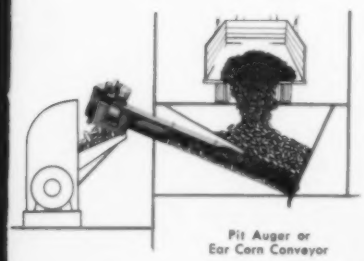
Combined Sheller-Cleaner

Instant Change Hammermills 12", 16", 20", 24" sizes

Finger Type Corn Crusher and Feed Regulator



Grain Feeder



Pit Auger or Ear Corn Conveyor

The Duplex Mill & Manufacturing Company — Springfield, Ohio

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- ☐ Corn Crusher — Regulator
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- ☐ Twin Molasses Mixer
- ☐ Vertical Screw Elevator
- ☐ Portable Screw Elevator
- ☐ Bucket Elevator
- ☐ Electric Truck Hoist
- ☐ Corn Sheller with Blowers
- ☐ Regular Corn Sheller
- ☐ Pitless Corn Sheller
- ☐ Combined Sheller-Cleaner
- ☐ Gyrating Cleaner
- ☐ Corn Scalper
- ☐ Corn Cutter and Grader
- ☐ Cob Crusher
- ☐ Electric Bag Cleaner
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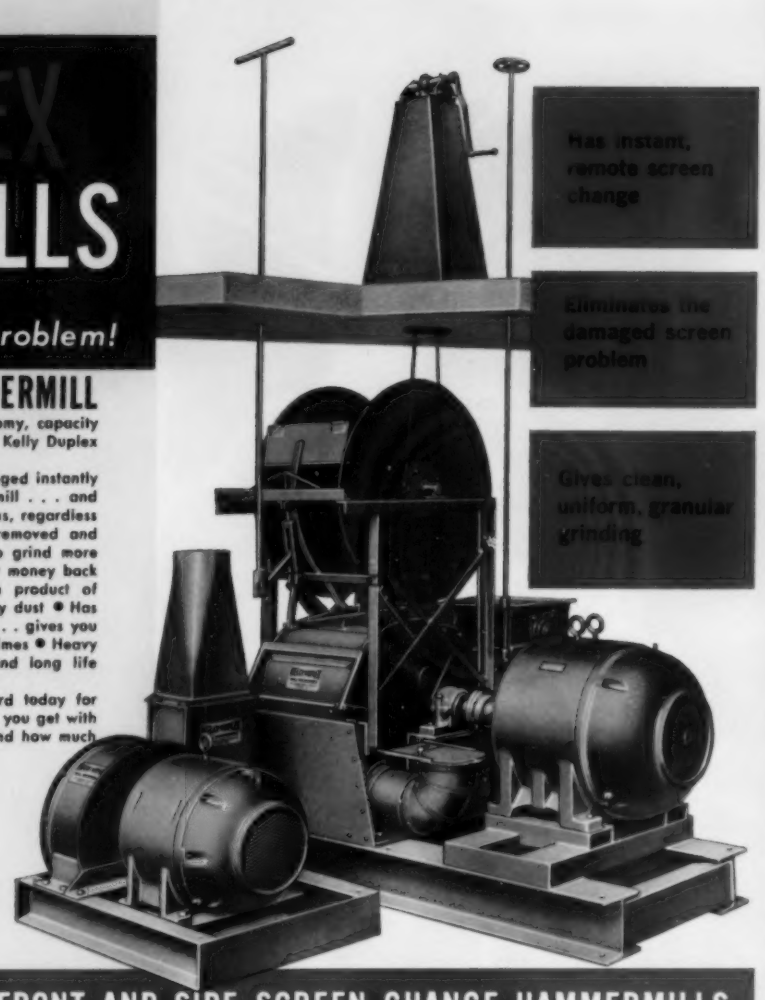

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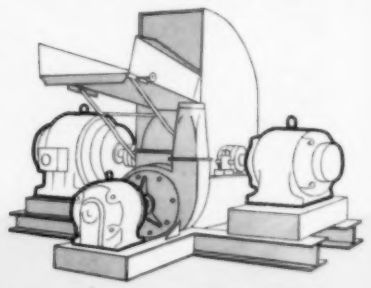

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Texas Firm Sets Up Swine Feeding Plan

By JESS BLAIR
Feedstuffs Special Writer

BIG SPRING, TEXAS—The Kimbell Feed Mill has ranged out in promoting a swine feeding program. The local company is now providing feed for about 2,500 hogs for farmers who live as far as 200 miles south of Big Spring. Most of this is new business, says manager Clyde Eager, and was acquired within the last year.

"We think hogs are a safer bet than any other kind of livestock or poultry," he said. "With hogs at 17¢ lb. these fellows can make money. Even at 15¢ they can still break even or better, and if hogs ever reach 20¢ again, there should be some real profit."

Not much grain is grown where the feeders are located, so they are buying a complete feed from the company. All feed is manufactured in pellet form and hauled in sacks. Later some producers will add bulk facilities.

All feed is manufactured at the Big Spring mill, and is then trucked to dealers in other areas. Occasionally it is taken direct to the farms of some of the larger owners, but the local dealer gets an overage on it.

Most of the feeders keep from 100 to 150 hogs, Mr. Eager says. Although the company does not insist on any special type of house, it does point out to producers that good housing and equipment will cut down on losses and save labor.

Some of the larger producers buy sows and raise their own pigs. Others buy pigs from local farmers. The hogs are marketed at local auction sales or sold to buyers who come to the farms.

Mr. Eager found that financing was the number one problem in getting the project started. When the company put some money in the venture, farmers were more willing to enter it.

"We do some rather heavy financing at the beginning," said Mr. Eager, "but it is not a 100% credit deal. We help buy the pigs or sows and finance the feed until the hogs are sold, but the farmer must also have something invested besides the house and equipment."

The company furnishes the services of a field supervisor who helps with sanitation and management problems. Thus far most of the new producers are doing an excellent job of management, says Mr. Eager.

"One advantage to this program," he pointed out, "is that we can use maize instead of corn. We are on the edge of the greatest grain sorghum area in the country, and feeders can't make much selling it at a price of $1.40 cwt. Right now we are expanding in this area, and prospects look good for our adding several more feeders."

In getting new business, the company finds that group meetings are the quickest and best method. For a meeting at Junction, Texas, the firm invited a group of prospective feeders to a hotel where they were entertained and told about the program. These meetings are quite successful, so the company plans others. In most cases, farmers are urged to keep enough hogs to make the project worthwhile. They are also told that in-and-outers seldom make money, that they must plan it as a long range program.

The Kimbell Mill is now one of the largest in this part of West Texas. The company started an expansion program over two years ago that included more storage, a pellet mill, a modern farm store and extra trucks.

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How Contracts and Credit Are Used In Contract Feeding of Poultry

Hatchery Owner Believes Easy Profits and Easy Credit Don't Necessarily Go Together.

By Jess F. Blair
Feedstuffs Special Writer

In practically all of the integrated feeding programs found in the South, the feed dealer or mill owner is the man in the middle. He is the key figure, for the success of the project probably depends more upon the feeding system than any other one thing.

In most cases, the project was started by a feed dealer who needed to sell more feed. The financing of broilers and laying hens was only a means of creating more feed sales.

Some hatchery owners also started broiler or laying hens, but they usually followed through by installing a feed mill. Some of the largest operators may own all three, the hatchery, feed mill and processing plant. Usually these men will be feeding out several million broilers a year.

Before a dealer starts a contract feeding program, the first thing he considers is the market. If it is to be broilers, are there any processing plants nearby? If the nearest one is 100 miles away, he may be operating at a handicap. Most integrators need to be close to the buyers, because broilers must be sold at a certain age and weight. Also trucking expense cuts into a diminishing profit.

If it is to be laying hens, markets are even more of a problem. Most of these dealers had created markets locally or in some large city not too far away. Some of the smaller ones were operating separately but marketing with other small dealers.

Provided the dealer has a market or can create one, he must then consider several things. With broilers he will arrange to buy baby chicks from a hatchery. If the hatchery owner is the integrator, he must set up farmers who will keep the breeder hen flocks.

The farmer usually furnishes housing, equipment and tends to the hens. For this he gets a varying price, depending upon the integrator and the contract signed.

EDITOR'S NOTE: This is another article by Jess Blair, special writer, summarizing various trends and developments in southern poultry feeding. Mr. Blair's observations, from a recent trip through the region, will be of particular interest to feed men in other areas who are not so familiar with the southern operations.

A Mississippi farmer had built his own 30 by 340 ft. laying house with native lumber and farm labor, at a cost of $6,000. This also included equipment. He was getting 10¢ per doz. for producing the eggs, but said the contractor was talking of reducing this rate because of low broiler prices.

The dealer setting up a broiler project must get some credit from somewhere, and he needs a lot of it. Sometimes part of the baby chicks can be bought on credit, and the major feed companies have gone in for heavy financing of their dealers.

However, this is just a part of the expenses. Likely he will need trucks for hauling birds and feed. He will certainly need a full-time bookkeeper and extra employees. And there will be medication and a lot of hidden expenses before the first bunch of birds are sold.

Expert on Staff

Every project investigated on a recent trip through the South had at least one poultry expert on the staff. He is either a college trained man or someone with years of practical experience. He inspects the flocks regularly and helps train the farmers in management methods.

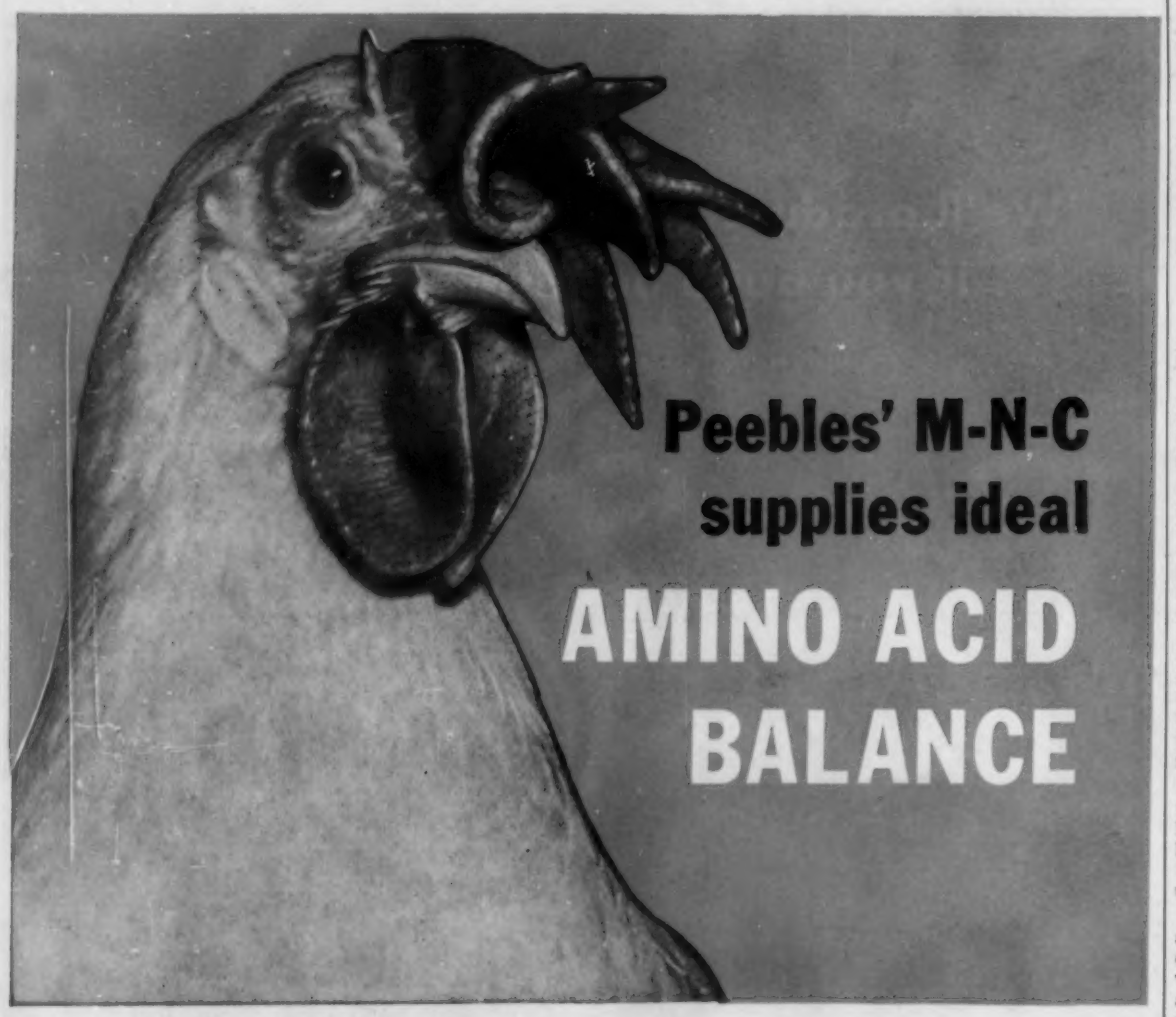
When time comes to set up the farm growers, most dealers select their men on past reputation, their ability to take orders and their willingness to work hard. Usually a contract is signed by the year, but within recent months many integrators are turning to the one-bunch contract. After a bunch of broilers are sold at from 8 to 10 weeks of age, the contract expires. This was brought about by sagging broiler prices, and many dealers say they may want to reduce flock numbers.

One man who has been in the business nearly 20 years does not even have a written contract. However, his growers are close neighbors and friends and they operate by verbal understanding.

Most contracts have been averaging about 5¢ per bird, though the grower gets extra pay for a good feed conversion and high percentage of saleable broilers. Some dealers pay by the pound, and a few hire the men to work at a salary. This, however, usually occurs when the integrator has birds on his own farm.

In growing broilers, within three months or less, the integrator gets a pay day.

"With laying hens it is different," said an Alabama feed dealer. "Then you have a baby chick that won't be worth anything to anyone until it is around 20-22 weeks old. We've found it best to set up started pullet grow-



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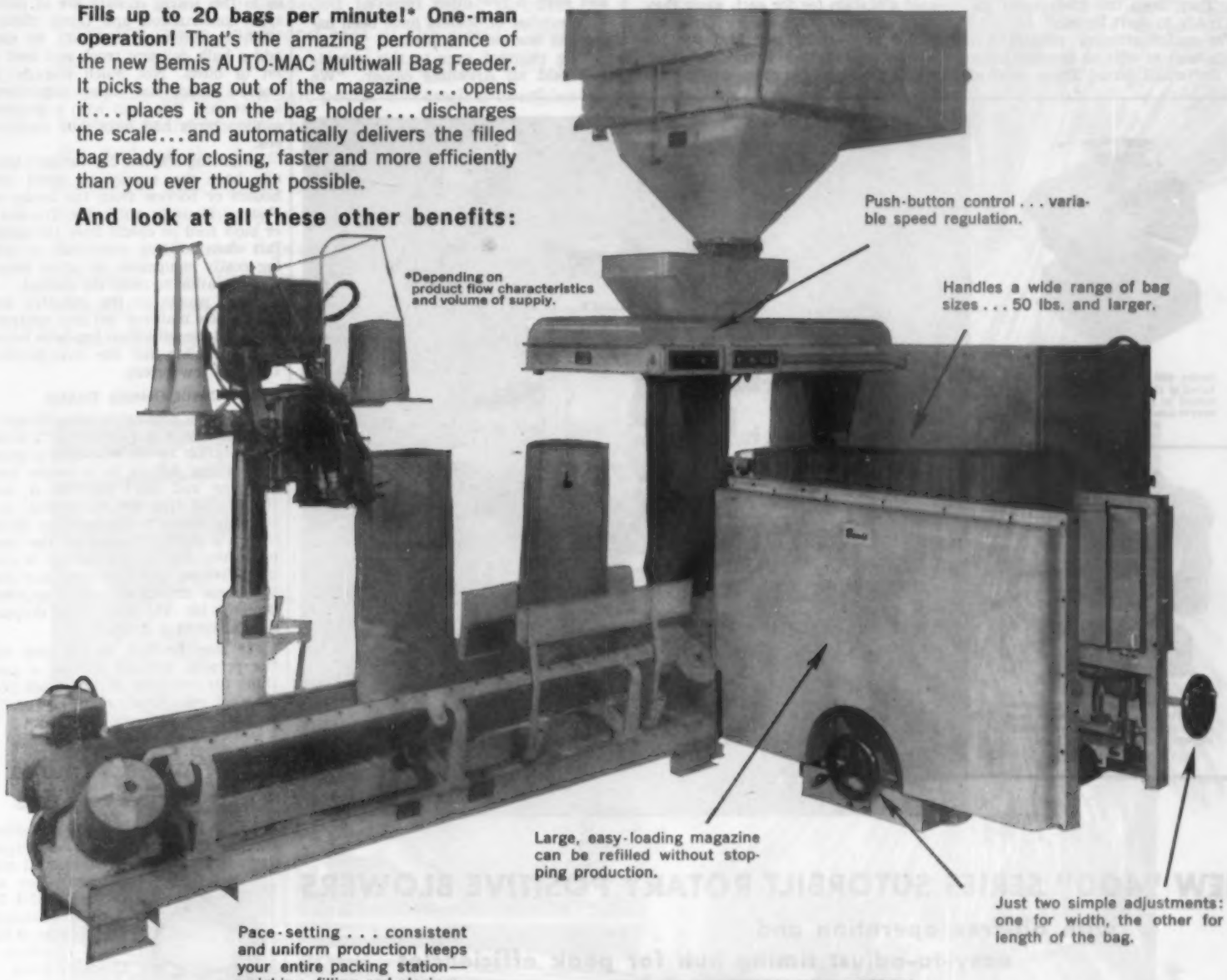
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*Depending on product flow characteristics and volume of supply.

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BROODER HOUSES—Production capacity at Ghostley's Poultry Farms has been expanded with the completion of two additional brooder houses at the Anoka, Minn., breeding farm. Construction of the two houses, with a total capacity of 55,000 chicks, was completed this summer as part of a long-range expansion and construction program, according to Fred J. Ghostley, president. A third house, with a total of 25,000 sq. ft. of floor space, is scheduled to go under construction in the immediate future, he said. The brooder houses, each 500 ft. long by 50 ft. wide, include eight pens, with four windows and a separate service door for each pen. There is a centrally located feed room for each house.

ers. They keep the birds until they are ready to start laying."

The pullet growers usually have range land as well as brooder houses for the small birds. These men are paid a certain fee for each week they keep a pullet. One dealer gives his pullet growers 8¢ per bird for 10-weeks' growth, then carries the birds to his producers. Another dealer pays a certain fee each week with no length of time specified.

The commercial laying house is built by the farmer, who also furnishes equipment and litter and sometimes pays the utilities. He also has a cooling room and may clean the eggs, but the eggs are taken to the dealer's plant for grading.

Egg Contracts

These egg contracts are more varied than with broilers. Many dealers have set up plans of their own, but generally the farmer gets a certain price per dozen, with extra bonuses for high production and low mortality rates.

In the contract the dealer specifies that the farmer must keep the feeders and waterers in good working order, gather eggs regularly, spray for flies, maintain a daily record of eggs and keep a few other records.

A number of dealers have been using the one-bunch contract.

"We changed over to this recently," said an Arkansas dealer. "We place the large pullets with the farm grower, and he tends to the hens until they have finished their laying period of 12-14 months. Then birds are removed, and the contract ends. At that point either one of us may quit if he chooses."

Flocks on Own Farms

As mentioned in a previous article, there is now a trend for some dealers to establish the flocks on their own farms. When this happens, they usually hire a man and furnish him with living quarters. He is usually paid by the week or month and is under no binding contract. He is just an employee the same as the truck driver who delivers the feed.

One thing peculiar to the poultry industry in the South is the ease with which a new dealer can get started—provided he has credit. Poultry houses in this warm climate are of pole-type construction and fairly cheap. With an ordinary feed mill, he can add a bulk delivery truck and feed a lot of birds. Not much storage is needed. Also, not many employees are needed. One man with a quarter million birds had only four employees.

In getting started, the farmers usually have the money to build the houses or borrow from the banks or Federal Housing Authority. The dealer buys feed on credit from the mills. But when building a new mill or adding costly equipment, he often forms a corporation to raise the capital.

Some people in the industry say that a new man can get into contract feeding too easily. That has been largely responsible for the over-production and low prices.

Credit Getting Tighter

"Credit is getting tighter, though," said the owner of a hatchery. "I know one contract feeder who owes a quarter million dollars to a major feed company and can't pay it. A few things like this are happening, and the easy money is disappearing. Right now it's getting harder all the time for a new man to get started in contract feeding. It's surprising how fast the purse strings tightened up when broilers hit 15¢ and eggs dropped several cents a dozen.

"It may be that in the long run the present debacle will be a good thing for everyone. It will teach people that easy credit and easy profits do not necessarily go together."

USI Appoints Morea Field Representative

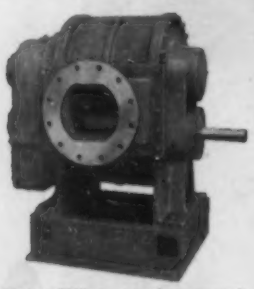
NEW YORK—Edward C. Carlson has been appointed as a field representative for Morea liquid feed supplement sales, according to U.S. Industrial Chemicals Co., division of National Distillers & Chemical Corp.

Edward C. Carlson

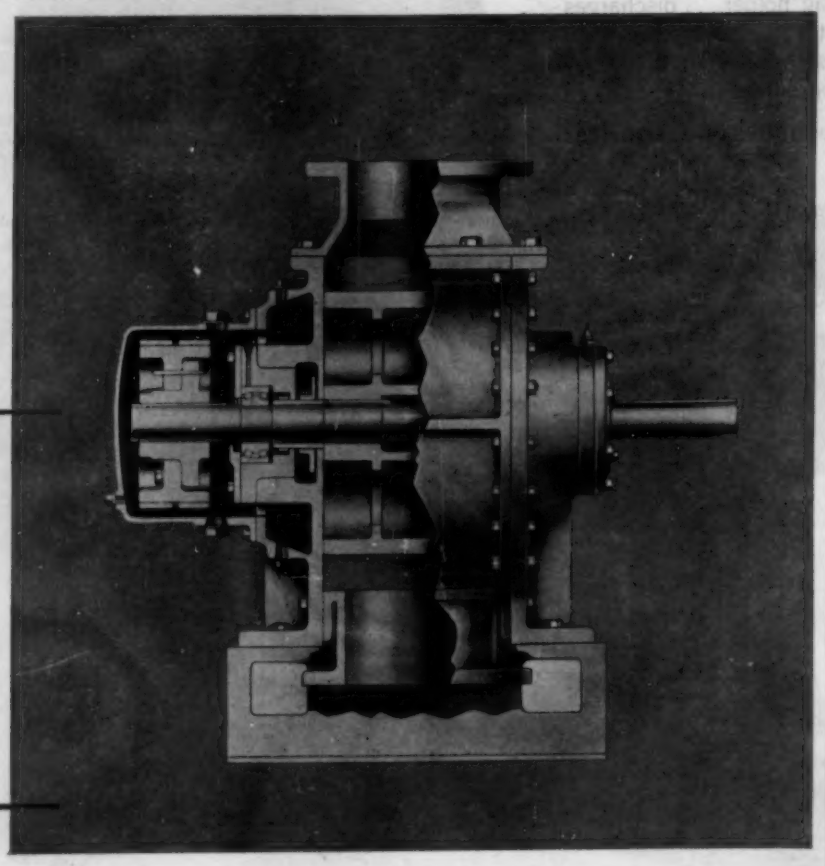
Mr. Carlson will headquarter at Columbus, Ohio, and travel throughout Ohio, Michigan, Indiana and part of Kentucky. He will help develop the market for Morea liquid supplement for ruminant animals.

His primary responsibility, the company said, is to promote sales of Morea premix to mixer-distributors who will formulate and sell the final Morea product to feeders of beef cattle, dairy cows and sheep.

Series 400 Blowers are manufactured of close-grain cast iron, reinforced to prevent distortion under severe conditions.



Series 400V, same as above, mounted vertically. Extended bases provided at additional cost, for mounting motor and drive.



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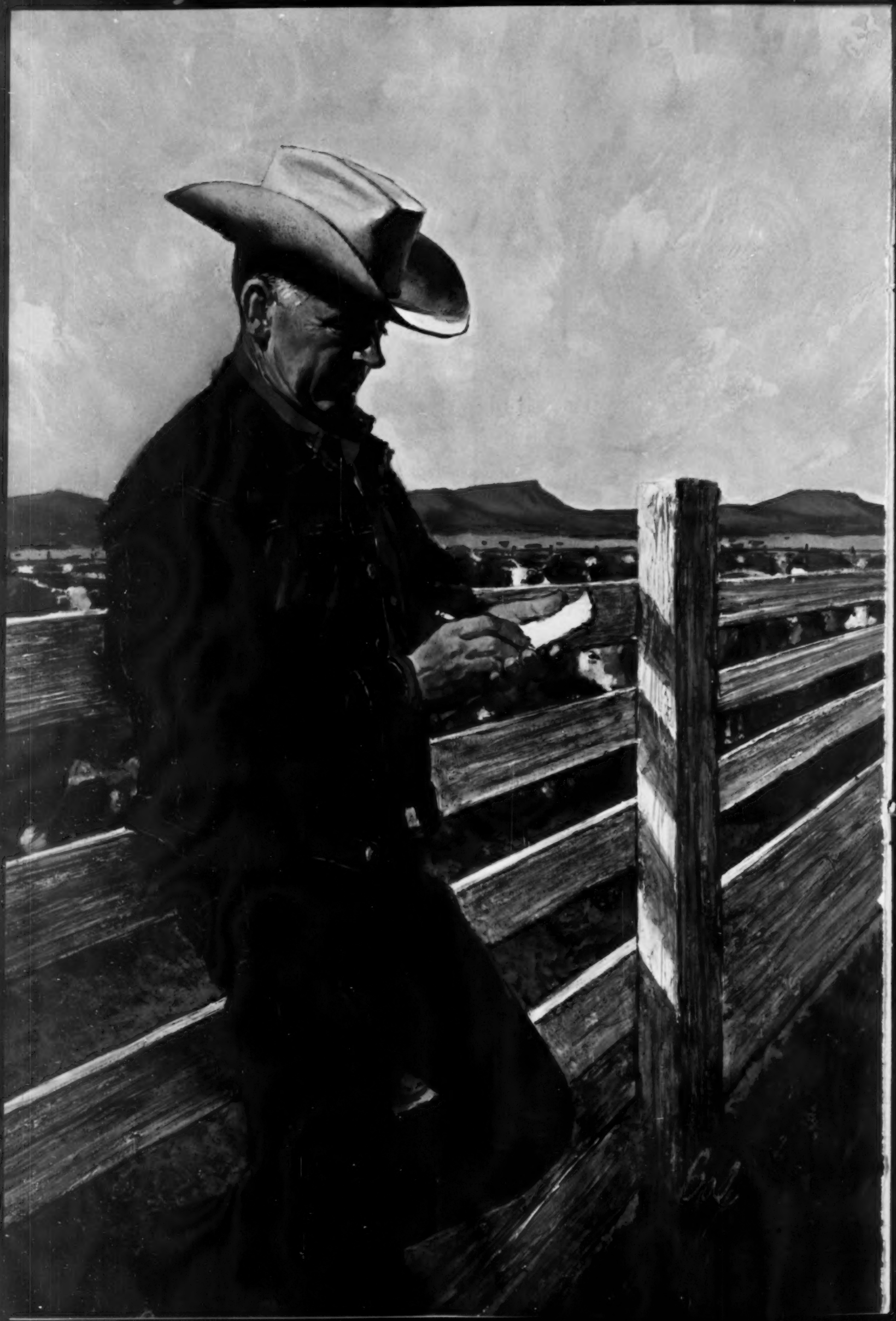
CARGILL *EXTENDING THE REACH OF THE AMERICAN FARMER*



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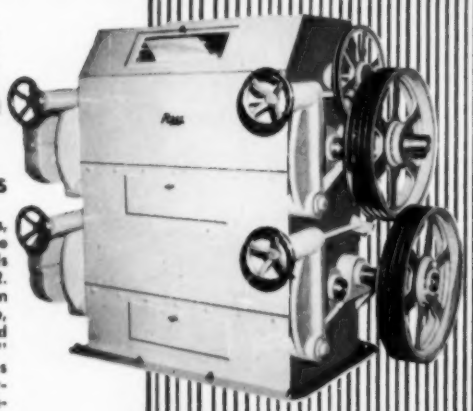

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FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Zirconiumxenelasiasudorific

Resemblance of the above to actual names of drugs and feed additives now listed on feed tags is intentional. Fortunately it has never been used and is not now being suggested. But it might well be one of the many names required on feed tags.

This has all of the attributes of an objectionable, common or usual name. It is long. It contains many syllables. It is difficult to pronounce. It is not a word with which consumers are familiar. This, if he were to see it, I believe, would be classified as a "jawbreaker" by John L. Harvey, deputy commissioner of food and drugs, U.S. Department of Health, Education and Welfare, who recently addressed the American Bar Assn.'s annual meeting in Florida.

State laws and the Federal Food, Drug and Cosmetic Act require the declaration of names of ingredients in an ingredient list. This is true of all ingredients with only rare exceptions. These exceptions, in the case of the federal law, Mr. Harvey pointed out, are:

(1) spices, flavoring and coloring;

(2) products that are dealt with under an identity standard (example: enriched flour);

(3) the name becomes impractical or results in deception or unfair competition.

Failure of relief in any of these provisions leaves no course under the federal act but to use the common or usual name in the listing of ingredients.

The suggestion that such long names might be dropped and a "functional purpose statement" used instead was dealt with in Mr. Harvey's remarks. This he dismissed because in his view the federal law does not give the power to require a functional purpose statement as a condition of exemption. Also he sees difficulty in determining how and when instances would be decided between the use of the common or usual name and a functional purpose statement.

May Change Names

This leaves no alternative but the common or usual name. Mr. Harvey comes up with a suggestion which is worthy of study by those plagued with "jawbreakers" in the feed industry. He indicated such names may be changed. He further outlined the process.

This is possible even though a product has been on the market for some time with a many syllabled chemical designation. A change in such a name can be established by those manufacturing and distributing the article cooperating in developing a new commonly accepted name. This can be used for a reasonable time. "During the period that this is being done, the despised jawbreaker would be carried parenthetically, and as soon as there is reasonable association between the adopted name and the product, the parenthetical jawbreaker can be dropped." He further comments, "This in my view need not take a long period of time."

"Establishing some system of reaching an agreement among different manufacturers as to the name selected for general use in order to establish it as a common or usual name" is seen as a first step.

Commissioner Harvey's remarks place this problem directly into the lap of industry. He feels certain that "the resources of industry generally are such as to enable the establishment of some system of clearance and agreement." Many will want to study the complete text of this thought-provoking clear-cut statement on this subject. It appears as a fresh approach to a growing problem facing all in the feed industry.

Feeder Pig Prices Drop to Low of $7

FRANCIS CREEK, WIS.—Prices were a good deal higher when the Wisconsin Feeder Pig Marketing Co-op started out a little more than two years ago. In fact, they were higher by nearly 250%.

Forty-pound porkers were bringing $16 and $17 in 1957. Recently they dropped to a new low of $7.

But the majority of the producers appear confident that there is still a future in the business. This was apparent when the cooperative put on a field day program for members near Francis Creek recently.

There was little talk about prices. Instead, they talked about such things as rate of gain, boar selection, cross-breeding and carcass quality.

Norman Dvorak, general manager of the cooperative, admitted the price outlook for the coming fall isn't too rosy. "But I'm confident that if we stay in and sweat it out we'll be in an excellent position when things get better," he told field day visitors. "But, now is the time to do a good job of selection."

Last spring the board of directors approved a quality clause in the contract. Under this rule the cooperative has the right to drop members who don't meet high standards.

About 2,700 producers belong to the cooperative. Approximately 4,000 feeder pigs go out weekly from the Francis Creek headquarters to pork producers in Iowa, Illinois, Indiana, southern Wisconsin and other corn areas.

Allied Mills Traffic Manager Promoted

CHICAGO—R. E. Harridge, traffic manager, Allied Mills, Inc., has been promoted to assistant general traffic manager, according to a recent announcement.

R. E. Harridge

Before becoming associated with Allied Mills, Mr. Harridge was employed by the Illinois Central Railroad Co. where his activities were directed to rates and divisions.

Mr. Harridge joined Allied Mills in 1957. He will continue to be active in rate and commerce work in the general offices of Allied Mills, Inc.

EGG PRICES

FORT COLLINS, COLO. — Prices of eggs are extremely sensitive to changes in supply, according to Colorado State University researchers. Colorado research indicates that a 10% change in supply will result in about a 33% change in price, other factors being equal.

Isn't one mixing salt as free-flowing as another?

You might think so if you believe all mixing salts that claim to be free-flowing need a whack every so often to keep from caking or lumping. But this is not the case with Morton Special Mixing Salt. It won't cake or lump even when humidity is high.

Morton Special Mixing Salt is the result of a unique treating process developed by the Morton research laboratory. As the first company to prepare a specially treated, free-flowing mixing salt, Morton has been copied—but not successfully. Unlike its imitators, Morton Special Mixing Salt has an extra free-flowing quality to assure even distribution in feeds and trouble-free "line" feeding.

Both Morton Special Mixing and Iodized Mixing Salt may be safely stored in bags or bulk for any reasonable length of time. You'll find they flow more freely after storage, than any other salt you have ever used.

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Sound Management Is Required for Successful Custom Milling Operations

- **Inventory Control**
- **Quality Control**
- **Maintaining Margins**
- **Providing Services**

By W. J. Arnold
Hubbard Milling Co.

Problems confronting the package feed dealer differ from those of the custom mixer. Essentially, the custom mixer is a manufacturer, in the sense that he completes the final mix of local grain with the concentrate portion of the ration, and has a capital investment in machinery and storage, whereas, the feed dealer has no capital investment in plant and acts solely as retail outlet for finished feed and packaged items.

The feeder sees advantages in custom mixing:

1. He can use his own grain or local grain supplied by his dealer and reduce the cost of the ration.

2. His feed is ground fresh just before use.

3. Special medications can be added as desired.

INVENTORY CONTROL — While it is necessary for each type of dealer to maintain an inventory control, the advent of many additives and specialty feeds has forced upon the dealer a complex problem of stocking many kinds of feed. He must keep these fresh and yet not run out when a customer stops in for an immediate pick-up. It is necessary then to have some system of stock control which must be kept on each item. One method is a simple cardex system where each day's deliveries are deducted from the total inventory and a new total arrived at, each item having a separate card. This will help the dealer, when reviewing the cards each morning, to decide upon any items that should be ordered.

There are other types of inventory control that may be more effective, but these controls usually depend upon the dealer's operation and sales. The dealer can call upon his auditors to recommend a system best suited to his operations.

Inventory turnover is a guide to maintaining proper stocks. The amount of inventory to carry will also be dependent upon the distance from the source of supply. The more times an inventory can be turned, the better use is made of working capital, and the more profit in the dealer's pocket. The usual inventory turnover figure used is derived by dividing the yearly cost of sales by the average inventory value. The custom miller in contrast to the package feed dealer can reduce his inventory to a few basic concentrates from which complete feeds can be formulated upon demand. Efficiency can be increased by carrying concentrates in bulk.

QUALITY CONTROL—The custom miller faces a problem of quality control as feeding requirements become more exacting. The old theory and practice that a custom mill is a place to clean up leftovers is as outdated at the Model T. The feeder expects to receive the same high quality feed that would be purchased from a manufacturer selling complete feed direct to the customer. The custom mixer can assure quality by choosing one of many complete concentrate programs and following a quality control program furnished by the manufacturer. A mixing record card should be kept for each customer with a complete record of his feeding program. This will enable the custom mixer to provide uniformity from one order to the next, point out where formula changes should be made, and include medication when required in emergencies.

The package feed dealer, however, is completely dependent upon the manufacturing mill. Any special problems related to treatment of the animal or any special feed desired must be relayed to the manufacturer and, in many cases, an irritating delay develops from the time of order to the time of delivery.

MAINTAINING MARGINS — No business can succeed without profits. Adequate margins are a necessity for the mixer as well as the non-mixing feed store, and most feed men will agree that custom in the area dictates the charge for grinding and mixing. The margin of profit is usually small from grinding and mixing, but this is a service which can build a profitable business. Most feed manufacturers provide a recommended retail price to guide their dealers in setting margins. This generally removes price differentials between neighboring dealers and avoids disastrous price-cutting. The custom mixer can maintain better margins and still deliver to the customer a ton of feed at a lower cost.

The well-equipped, well-operated and efficiently-managed feed mill becomes a genuine asset to the entire community.

PROVIDING SERVICE—To meet the needs of his community, the custom mixer must maintain a plant that provides:

(a) Adequate grinding capacity—New equipment may be necessary. A survey by a manufacturing representative can determine means of speeding up grinding. A separate 25 hp. motor on the fan of a 75 hp. hammermill will increase the average grinding capacity 35%. However, keep in mind that pipes and dust collectors must be adequate for the new capacity.

(b) Grain bank facilities combined with bulk delivery service can increase capacity by avoiding periods of rush and periods of down time.

(c) Bulk handling of concentrates and finished feeds. This has a two-fold advantage. First, it speeds up the operation and makes the operation more efficient, and, secondly, it provides for additional margin. The feed dealer, in most cases, can retain the bulk discount on the concentrate and still show the feeder added saving in the bulk finished feed. There are several methods of converting an operation to bulk concentrate for grinding and mixing:

(1) If an elevator leg is available, this can be utilized by diverting existing bins to concentrate bins. If this leg is used for handling grain, great care must be used to eliminate contamination.

(2) A separate installation may be put in which provides a leg, scale and holding bins for concentrate and finished feed bins. This is the so-called bulk package station.

(3) Finally, there is the method of using low-cost steel fabricated bins near the present mixing plant. These bins can be filled by the concentrate manufacturer's truck and eliminate the need for costly legs. This method does not disrupt present facilities and can be expanded as needed. Getting into bulk operation by this method is relatively inexpensive.

Whatever plan is adopted for bulk the following things should be kept in mind when plans are made:

1. Avoid tying up present machinery that is needed full time now—(scales and legs or conveying equipment).

2. Keep bulk facilities where they add to your customer service, not interfere with your custom grinding operation.

3. Locate where deliveries to or from bulk bins do not interfere with your driveway or service area.

4. Maximum reach of the discharge auger of the bulk truck should be considered in determining bin height.

5. Allow for expansion.

CONCLUSION—The problems of the feed mixer are comparable to any business problems. They must be solved with sound management decisions.

Many feed manufacturers and feed manufacturing associations have stepped up the training of the management for small feed mills. The feed mixer should avail himself of every opportunity to keep abreast of the changing demands of his trade.

W. J. Arnold

AUTHOR—W. J. Arnold is general superintendent for the Hubbard Milling Co., Mankato, Minn., manufacturer of Hubbard Sunshine Feeds and Concentrates, and in connection with his work, he has had extensive contacts with custom milling operations. Mr. Arnold is feed production manager at Mankato, and as general superintendent for the company, he also is responsible for design, installation and maintenance of all properties. His milling experience extends back to 1924. He became associated with Hubbard in 1945 as flour mill superintendent. Later he was named feed mill superintendent at Mankato and also supervised construction of the Hubbard feed plants at Marion, Ind., and Cedar Rapids, Iowa. He recently was given additional responsibilities with the title of general superintendent.

Various aspects of modern custom milling operations are covered in the accompanying article. One of the topics is bulk handling of concentrates and finished feeds. This picture shows a delivery being made to the bulk concentrate bins recently installed at the Lake Mills (Iowa) Farmers Co-operative Elevator Co. Herb Zielske, manager, estimates the approximate cost of 35 tons of concentrate storage plus augers and weigh buggy at $1,750.

N. J. Poultry Meat Production Analyzed

TRENTON, N.J. — A report on poultry meat production in New Jersey has been issued by the New Jersey Crop Reporting Service following a survey of over 300 growers, according to the State Department of Agriculture. Copies are available on request.

While New Jersey's poultry industry is devoted largely to the production of eggs, there are poultry meat establishments located in every county except Hudson. The report reveals that in contrast to the extensive increase in production of broilers in most states, the majority of New Jersey growers are concentrating on the heavier classes of meat chickens, particularly the light and heavy caponettes and heavy pullets. Only 64 growers of the 302 surveyed are listed as producers of broilers and fryers averaging 3.5 lb. each. Their production amounted to only 11% of the total number sold.

Slightly more than 6 million meat type chickens of all classes were grown in 1957, and of these 55% were heavy caponettes averaging 5.4 lb. each. Heavy pullets, averaging 5.7 lb. each, totaled 977,000 birds.

The two most important counties are Gloucester and Ocean. Atlantic, Camden, Cumberland and Salem followed in that ranking.

K. C. Golf Outing Will Be Sept. 22

KANSAS CITY—The Fall Outing of the Kansas City Feed Club will be held Tuesday, Sept. 22 at Hillcrest Country Club.

Golfers will tee off any time after noon. The cocktail hour will start at 5 p.m. A buffet dinner at 7:30 p.m. will be followed by the distribution of $100 worth of prizes to golfers and non-golfers.

Feeding Holstein Steers More Profitable Than Selling as Vealers

FORT COLLINS, COLO.—There's money to be made on Holstein steer calves, but selling them as vealers isn't the way to do it in Colorado. It's more profitable to put enough age and weight on the animals to either sell them as feeders or put them in the feedlot, a Colorado State University dairy scientist says.

Holstein steers will usually grade U.S. Standard and can't compete with the beef breeds in the higher grades. Accept that fact and almost any reasonably good feeding system should pay off, says Dr. Gerald Ward, associate dairy husbandman with the CSU Experiment Station.

Dr. Ward bases his conclusions on a three-year study in which more than 100 Holstein steers were raised and slaughtered.

In two years' work with veal calves, high-quality vealers weighing around 225 lb. at three months of age were shipped to Denver. The calves had gained an average of 1.69 lb. a day since birth and each calf had consumed an average of 1,174 lb. of milk. Dr. Ward figures a net loss of about $20 a head each year on this type of vealer.

But when calves were handled as feeders value at the time they were put into the feedlot was substantially more than initial cost of the calves plus cost of feeding them to feedlot weights, Dr. Ward reports.

Initial cost of the calves averaged $10 each and cost of feeding to feedlot weights of 650 to 750 lb. ran from $64.38 to $77.36 per animal. Comparable feeder cattle during the three-year period were selling from $16.75 to $22.50 cwt.

Value of the steers at the time they were put in the feedlot ran anywhere from $15 to $40 more than initial cost plus cost of feeding to that point.

Some steers were fed an all-roughage ration, free choice. Others got roughage plus 10 lb. of grain per day. The all-roughage steers made cheaper gains but required a feeding period of from 50 to 60 days longer than those fed the roughage-grain combination. Additional labor and other costs could more than offset the cheaper gains of the all-roughage system, Dr. Ward says.

"At the same time, however," Dr. Ward said, "if there is no ready market for the type of roughage beirg fed, the all-roughage ration may have decided advantages. The steers could be carried over a longer period to take advantage of a potentially better market, for example.

"Steers on all-roughage rations usually are rangy and lack finish in weights up to 900 lb. Gains beyond this point improve the animals' appearance to a marked degree. Therefore, roughage-fed steers probably should be carried to the heavier weights before marketing."

Two Sales Promotions Announced by Pfizer

NEW YORK — Two promotions within the agricultural sales division, Chas. Pfizer & Co., Inc., were announced by Hugh Dermody, assistant general manager of the division.

Frank Tuppeny, field salesman in the southern New Jersey area, will join Pfizer's headquarters staff in New York as assistant feed supplement product manager.

Edward T. Hughes, field salesman in upstate New York, has been promoted to animal health supervisor in the eastern region, with headquarters at Clifton, N.J.

Mr. Tuppeny is a native of Alden, Pa. He received a B.S. from Pennsylvania State University in 1949, with a major in agricultural economics, and a master's degree in business administration from Michigan State University in 1952. Prior to joining Pfizer in 1957, he was employed by American Stores Co.

A native of Scranton, Pa., Mr. Hughes received a degree in pre-law from Dickinson College in 1950. He has been an agricultural sales representative since 1956.

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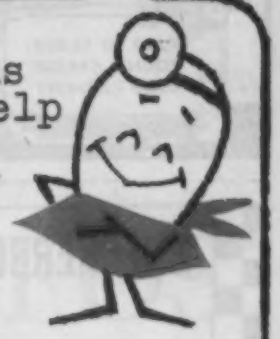

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Conforms to U.S. Weights and Measures H-44 for your protection.

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Richardson GB-38 Bagger
Provides Fast, Exact Bagging of Molasses Feeds

The new, fully automatic Richardson GB-38 Bagger is constantly increasing production speed and cutting costs in the molasses feed industry. In recent reports from a leading feed manufacturer the combination of a GB-38 Bagger and a Richardson G-73 Impacker has provided savings at the rate of $10,000 per year on one production line. You, too, can rely on Richardson... a name which for more than 55 years has been solving materials handling problems in the feed industry.

Every Richardson scale is backed by Richardson's own national service organization. Write today for further information on the Richardson GB-38.

Check these features designed to save you time and money:
- Specially designed for molasses feed.
- Speed up to twelve 100-lb. bags per minute.
- Accuracy to within an average of 4 ounces.
- Fills 25, 50, 80, and 100-lb. bags.
- Fully automatic operation.
- Durable construction—longer lasting.
- Stainless steel inlet chute, gate plate, and weigh hopper for lasting protection.
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- Vital surfaces are coated with Teflon, a material to which molasses cannot adhere.

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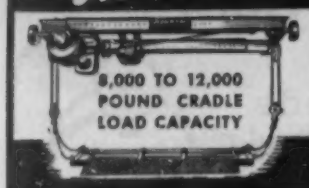

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To Discuss Trends, Problems at Virginia Poultry Convention

RICHMOND, VA.—A vice president of the Farm Journal will be the keynote speaker at the 29th annual convention of the Virginia State Poultry Federation in Richmond, Oct. 20-21. Wheeler McMillen, writer and executive, will give the opening talk of the two-day convention at the John Marshall Hotel.

The announcement was made by Elmer Clay, of Blackstone, federation vice president and chairman of the convention committee.

Mr. Clay said: "Mr. McMillen will present a down-to-earth analysis of current economic and political trends affecting American agriculture with specific emphasis on the meaning of these trends to Virginia poultry producers."

He said Tuesday has been designated as "Producer Day," when the program will be aimed at providing growers with the best information available on which to base their plans for the future.

Assistance is being given to the committee by the poultry and egg section of the Virginia Department of Agriculture, Virginia Polytechnic Institute poultry department and extension service, the Feed Sales Improvement Assn., the Feed Servicemens Assn. and a number of feed and poultry business firms.

Other speakers on the Tuesday morning program will direct their attention to the situations confronting producers of broilers, turkeys and commercial eggs.

Some 30 commercial exhibits, made available for the first time at a Virginia convention will feature the latest in goods and services available to Virginia producers.

CHICKENS FITTED WITH PLASTIC BLINDERS

TIFTON, GA.—More than 40,000 chickens in Tift county have been equipped with plastic blinders, according to Perry McCranie and Bill Bowen, egg producers in the area.

Mr. McCranie and Mr. Bowen have 16,000 chickens in their operation that have been fitted with the blinders, and about 24,000 other chicks in the county are wearing them. The purpose is to help prevent the chickens from fighting and pecking each other. The blinders allow the hens to see to the side and downward, but not in front. This lets the chicken eat and drink, but helps avoid fighting.

To put on the blinders, a small cotter key is stuck through the lower part of the nasal passage, piercing a thin membrane, and the key is bent. The blinders can be used several times.

Mr. McCranie said the blinders used in the poultry business are not new, but are new in style. He said the first ones were made of metal but were not successful because they were not flexible.

The blinders stay on the hens until they are culled or die. Then they are removed and stored for future use.

Promotion on Oregon Fryers Scheduled

SALEM, ORE.—A $30,000 advertising and promotional contest for "Oregon Fresher Fryers" was approved by the Oregon Fryer Commission.

Confidence in the future of the Oregon broiler industry was demonstrated by a unanimous vote taken by the commission on the approval of the state-wide consumer contest in October.

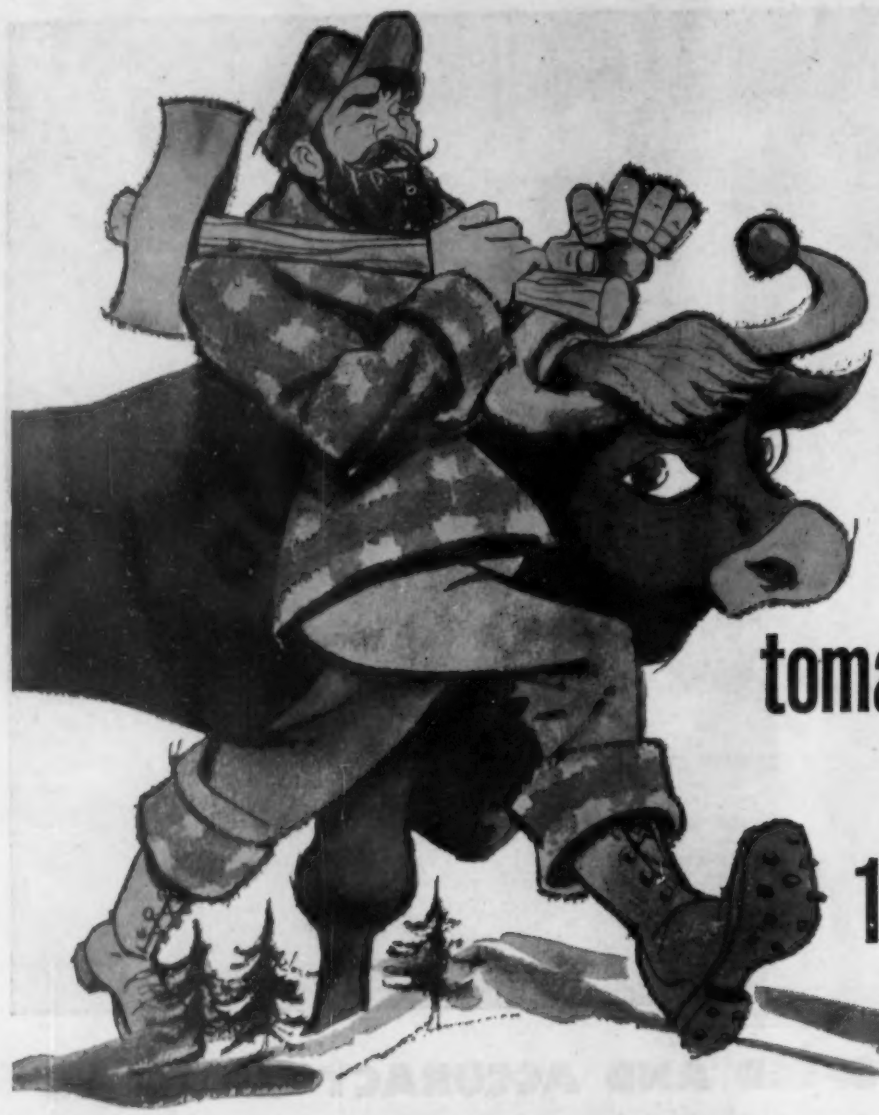
This promotion rejects an earlier request to lower the assessment rate offered by a few members of this industry, and although all details are not complete, the plans are to have the contest in effect by Oct. 6. Prizes valued at several thousand dollars are now being arranged for the kick-off date.

Purpose of the contest is to increase consumer acceptance of Oregon fryers, and is being financed by money paid by Oregon fryer growers to the commission.

Port of Bainbridge Reports Tonnage Total

BAINBRIDGE, GA.—Total tonnage for the Port of Bainbridge during the fiscal year July 1, 1958, to June 30, 1959, hit 118,227 tons, according to Deasy Rahn, port manager. The total included 1,200 tons of grain, mostly corn, imported by Flint River Mills, Inc., a feed manufacturing plant.

The Bainbridge State Docks on the Flint River will complete two years of operation Oct. 1, 1959.



143 ax handles, 17-10c tomato cans, and 1 tobacco box

This odd assortment of material made up the first "official" horn-tip to horn-tip measurement of Paul Bunyan's famous blue ox, Babe. Unfortunately, Babe's later growth could never be recorded because he "growed" two feet more each time you looked at him. No doubt about it . . . Paul Bunyan knew his onions when it came to productive livestock feeding.

Even though your feed can't turn out such fabulous creatures as this, it can produce far better real-life results for you and for your customers. Modern mills throughout the country have been achieving an entirely new concept of high-efficiency feeds through the addition of an important new ingredient . . . stabilized animal fat.

Animal fat increases feed efficiency more than any other single ingredient because it contains twice as much energy per pound. Its use makes possible new high-powered feeds for poultry, hogs, or cattle . . . high-efficiency feeds that mean better conversion, lower cost per pound of weight gain, and increased growth rate. In addition, animal fat adds better appearance and palatability, reduces dustiness in feed, and increases capacity of pellet mills.

You'll get better prices and more sales with your fat-fortified feeds because they do more for the user . . . give him greater profits through better results.

No matter if you're large or small, you can use animal fat easily and profitably to improve your product. Write for our free booklet that fully describes the application of fat to feed. You owe it to yourself to have this valuable information.

nra national renderers association
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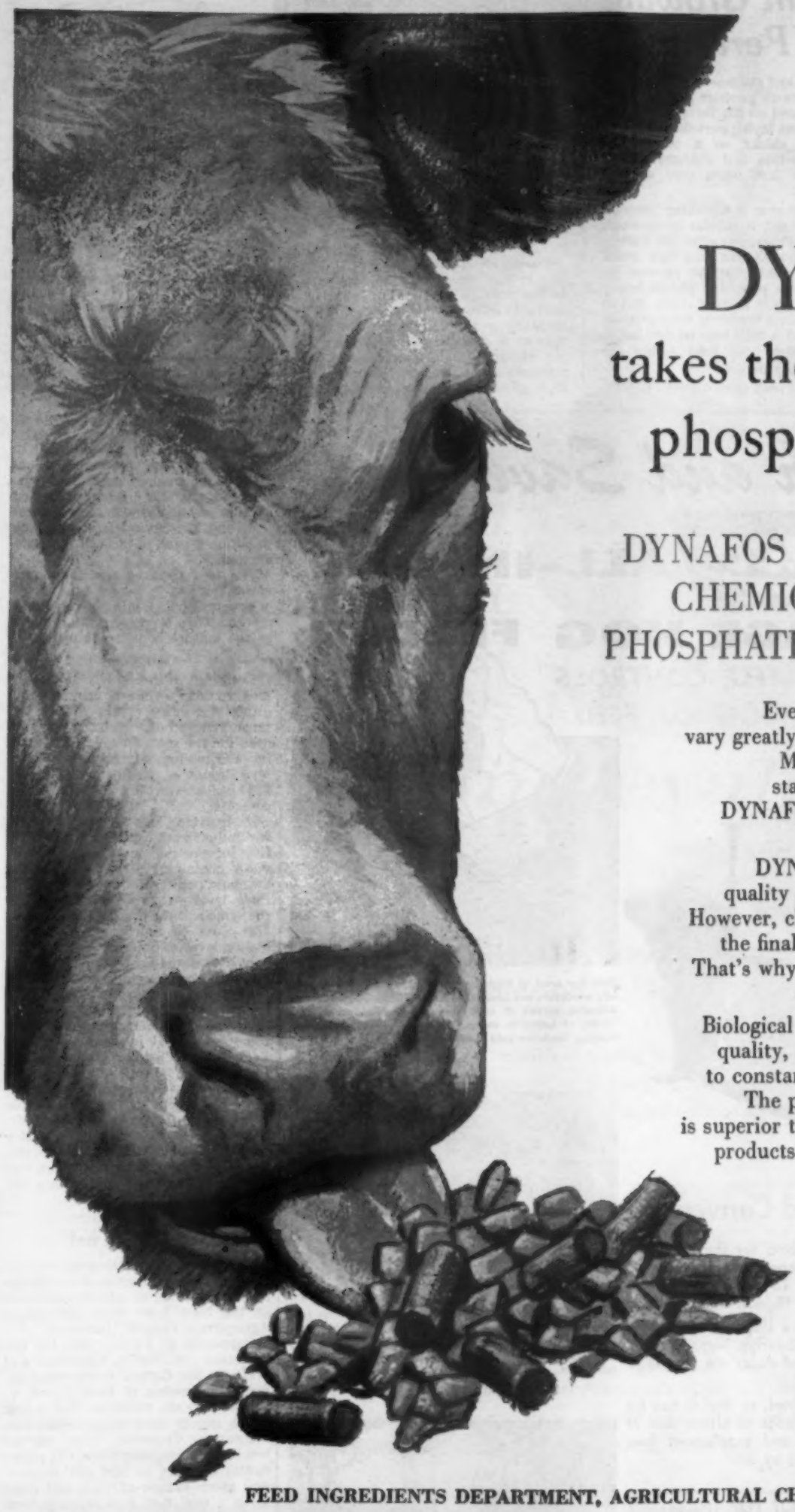

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FEED INGREDIENTS DEPARTMENT, AGRICULTURAL CHEMICALS DIVISION

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High-Fiber Feed from Growing Through Laying Period

By DEWEY McNIECE
Georgia Extension Poultryman

Numbers of poultrymen use a high fiber feed during the growing period, but few have tried it through the entire laying period. Van Bryant, Grady County, Georgia, is one of these poultrymen. A poultryman for over 30 years, and who has 7,000 layers at the present time, Mr. Bryant said he had lost money only one year. This was when a hatchery sold him broiler type New Hampshires for an egg production strain. He is one of the few poultrymen in Georgia that uses Rhode Island Reds for market egg production. Most of the birds in the state are Leghorn or Leghorn type that are kept for this purpose.

Mr. Bryant mixes snapped corn—grain, cob and shucks—with a poultry concentrate to produce all the poultry feed used on his farm during the growing and laying periods. He starts his baby chicks on a commercial starting ration and changes to the high fiber feed when they are six weeks old.

The first year a high-fiber growing feed was used, a regular commercial laying mash was fed after the pullets started laying. This was four years ago. The next year he planned to change feeds when the pullets began to lay but kept putting it off, and in the meantime the birds were producing at such a high rate he decided to use the high fiber feed during the entire laying period.

The feed used from 6 weeks to 50% production is composed of 700 lb. of a 36% protein concentrate and 2,000 lb. of snapped corn. Snapped corn has approximately 80% of the feeding value of shelled corn. As most any corn grower will tell you, 70 lb. of snapped corn will yield a bushel of shelled corn.

The protein content of snapped corn is approximately 7%. This is assuming that shelled corn contains 8.5 to 9.0% protein and that chickens get no value whatsoever from the cobs and shucks. Snapped corn contains 10.5% fiber compared to 11% fiber in oats.

Protein Content

During the growing period the pullets receive this feed that contains 14.5% protein. This feeding program seems to allow the pullets to develop normally as they are in 50% production at 6 months of age. This year Mr. Bryant decided he would delay maturity so he used only 500 lb. of a 36% protein concentrate to 2,000 lb. of snapped corn. This provided a feed that contained 12.8% protein. The pullets reached 50% production at seven months of age.

The laying mash contains 800 lb. of a 36% protein concentrate and 2,000 lb. of snapped corn. This mixture contains 15.3% protein. The production of the flock has been excellent, and Mr. Bryant is usually able to obtain a peak of at least 90% production.

The feed required per dozen eggs varies from 4.1 lb. during peak month of production to 6.8 lb. during lowest month. This is reasonably efficient as the mature hens weigh 6 lb.

Feed Costs

Feed cost averages 3.2¢ lb. A local feed company with a portable mill grinds and mixes all the feed on the farm. The mill charges $2.15 per hundred for the snapped corn and grinding and mixing. At the present time Mr. Bryant is paying slightly over $100 per ton for the 36% protein concentrate.

In analyzing this feeding program, we find it is quite similar to the mixture of one-half oats and one-half mash containing 20% protein, used by many poultrymen in Georgia. The fiber level would be approximately the same and the protein level reasonably close. Of course, oats contain a higher level of protein, but this can be compensated for quite easily by increasing the protein concentrate.

Several poultrymen in Grady County and surrounding areas are using this type of feeding program. This is the first year it is being tried with Leghorns and Leghorn type birds so the results might be quite different.

It is a simple program and may become quite popular especially in the corn growing area of Georgia. Mr. Bryant thinks he makes more money by following this system. He realizes that the hens eat slightly more but not enough more to overbalance the difference in cost.

Seek Simple Test

ITHACA, N.Y.—A simple field test to indicate the presence of antibiotics in milk is being sought by scientists at the New York State College of Agriculture, Cornell University.

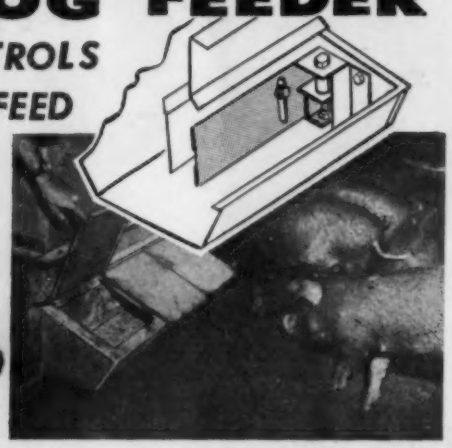
Supported by a grant from the Department of Health, Education and Welfare, the Cornell researchers under the direction of Prof. Frank V. Kosikowski are trying to find a test which can be used without extensive laboratory facilities. The method would enable veterinarians and public health officials to find out whether any given sample of milk had come from a cow that had recently been treated with penicillin or a similar antibiotic. Such antibiotics tend to be passed from the cow to the milk.

Save Labor and Save Feed

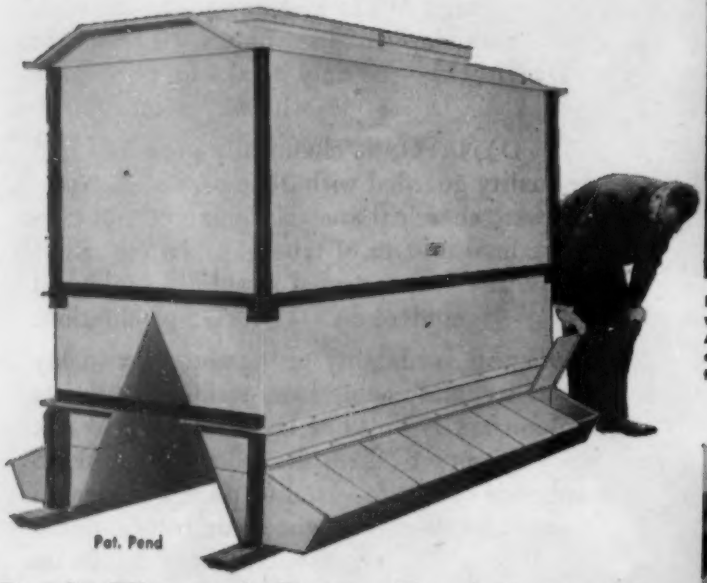
with Lemanco ALL-IN-ONE

BULK STORAGE HOG FEEDER

SPECIALLY DESIGNED BAFFLE CONTROLS FLOW OF FEED



Note low level of feed—no wastage on floor—one reason why producers are acclaiming LEMANCO'S BULK FEEDER. Adjusting screws at each corner regulates opening and closing of baffle to desired setting to prevent overfilling troughs. Locknuts hold baffle in place.



Pat. Pend

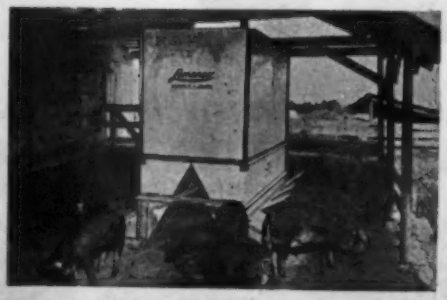
Profit Through Better Feed Conversion

The LEMANCO BULK HOG FEEDER is designed for the producer who demands more efficiency in his feeding operation. It is 8 feet long, 3½ feet wide and 7 feet high, with a 16-hole feeder. With 36-inch sides the capacity is 2½ tons. With 48-inch sides, 3 tons.

The sturdy feeder base, which has a 60-degree slope for free flow of any hog feed, is made of 14-gauge copper-bearing 2-ounce coated galvanized culvert steel. The sides, roof and doors are 16-gauge galvanized steel.

The bin can be partitioned lengthwise, if desired, so that it can be used as a fence row feeder for different age hogs on either side. It can also be partitioned crosswise for corn and supplement free choice feeding and can be adapted for filling by air.

As an inside feeder, bin can be filled either through roof with a LEMANCO ROOF DOOR, or the auger can be swung in under the roof, as shown. As an outside feeder, wide roof hatch permits filling to capacity—makes checking feed easy.



This feeder will accommodate many more hogs than the conventional 16-hole feeder because the hog does not waste feeding time rooting in the trough. In pasture or feed lot, bin can also be filled by bag from farm truck.

WITH TOP (Outside)		WITHOUT TOP (Inside)	
MODEL	WEIGHT (Approx.)	MODEL	WEIGHT (Approx.)
OB 83518-48 (3 ton)	965 Lbs.	IB 83518-48 (3 ton)	855 Lbs.
OB 83518-36 (2½ ton)	900 Lbs.	IB 83518-36 (2½ ton)	790 Lbs.

For further information write or telephone
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P. O. Box 1010 GADSDEN, ALABAMA Tel. LIberty 7-5472

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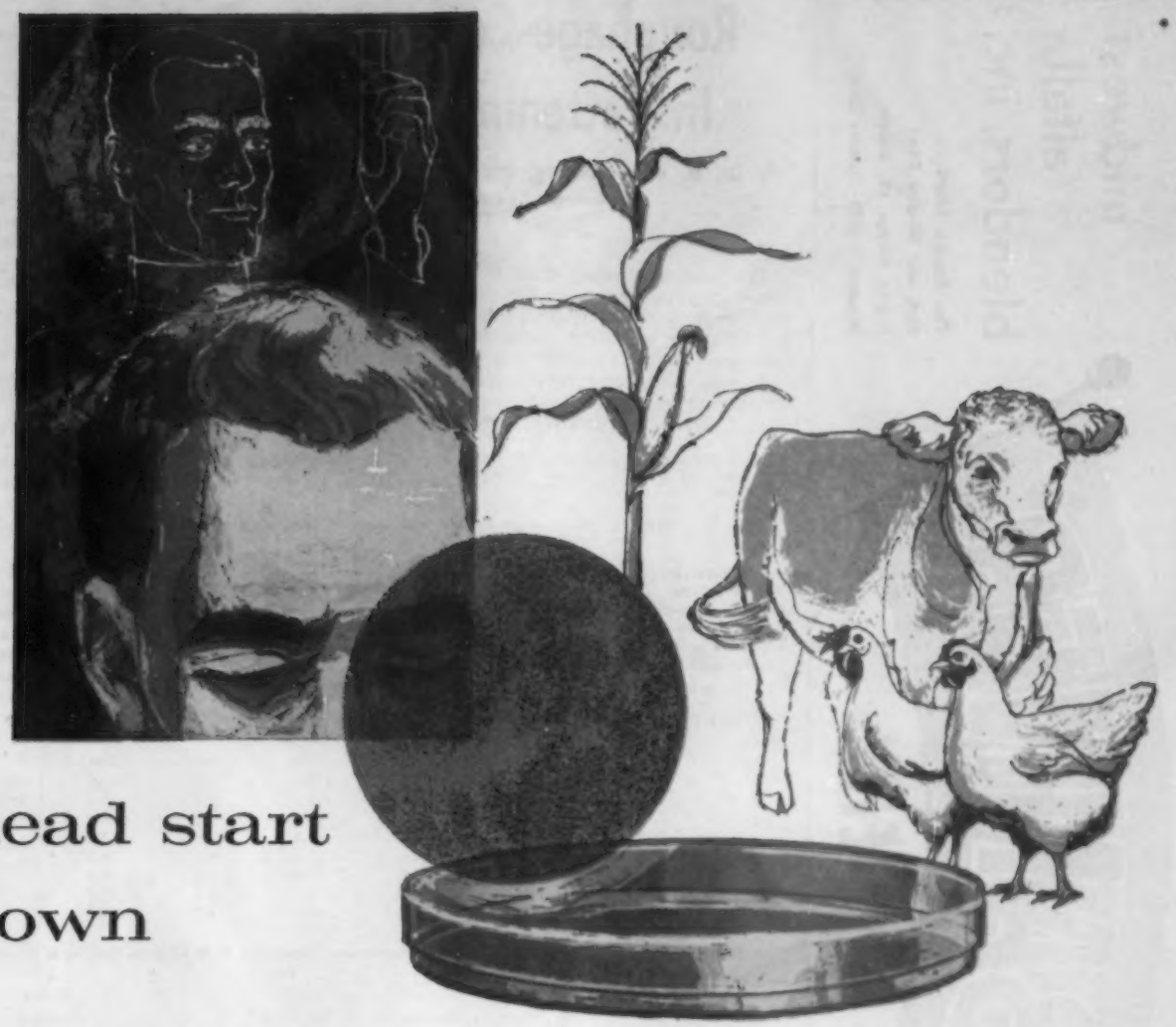

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TAKAMINE* can put over 60 years of enzyme experience to work for you NOW

Current enzyme research is building keen interest in enzymes for livestock and poultry feeds. Ten million broilers already have documented TAKAMINE enzyme results with western barley. Recent cattle tests show that feed enzymes increased gains 12%, lowered feed required per pound of gain by 7% when included in dry corn fattening rations.

TAKAMINE enzymes have been used experimentally in animal and poultry feeds since 1924. With more than 60 years of enzyme experience, TAKAMINE rates as a leading supplier of these *natural* catalysts to the feed, food, pharmaceutical and industrial fields, where rigorous quality control, uniformity of product, stability and reproducibility of results are required.

You'll also benefit from the continuing intensive and extensive TAKAMINE research program by authoritative and experienced specialists in this complex industry.

These are some of the reasons why TAKAMINE feed enzyme materials can be helpful in your enzyme evaluation. They're available now for your current research. Also our Technical Service Department stands ready to offer assistance in this highly specialized work. Call, wire or write us for details.

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MIDWEST GREEN BANNER DEHY

DEPENDABILITY... in Quality and Service

Roughage-Concentrate Ratios In Fattening Steer Rations

By Dr. D. W. Beardsley, Dr. W. C. McCormick and B. L. Southwell
Georgia Coastal Plain Experiment Station
Tifton, Georgia

The favorable results from pelleting high roughage feeds for cattle have brought about renewed interest in the use of larger amounts of roughages in fattening rations.

In this area steer fattening programs are based principally on the use of ground snapped corn, cottonseed meal and Coastal Bermuda grass hay.

In order to make maximum use of these locally grown concentrates and roughages, and to study what effect pelleting might have on the performance of steers fed rations made up of these feeds, the experiment reported herein was conducted. The two principal objectives of this trial were: (1) To study the effect of pelleting a mixed ration on the feedlot performance of steers being fattened for slaughter, and (2) to determine the optimum concentrate to roughage ratio for fattening steers on pelleted and unpelleted mixed rations.

EDITOR'S NOTE: The research covered in this article indicates that pelleting a high roughage ration, in which most of the roughage is Coastal Bermuda hay, will improve the performance of steers on this type of ration, whereas pelleting a high concentrate ration does not improve steer performance. The authors' work was mentioned briefly in Feedstuffs Aug. 15, page 44, as part of a report on the Georgia Beef Cattle Short Course.

Experimental

Long yearling steers, grading mostly "good" as feeders, were randomly allotted to seven lots of nine each and placed on the following treatments: Lot 1, concentrates and long grass hay free choice; Lot 2, ground mixed ration—70% concentrate, 30% roughage; Lot 3, pelleted mixed ration—70% concentrate, 30% roughage; Lot 4, ground mixed ration—55% concentrate, 45% roughage; Lot 5, pelleted mixed ration—55% concentrate, 45% roughage; Lot 6, ground mixed ration—40% concentrate, 60% roughage, and Lot 7, pelleted mixed ration—40% concentrate, 60% roughage.

The rations were made up of

(Turn to page 71)

[1] Pelleting of mixtures used in the experiment was done by Mixon Milling Co., Cairo, Ga.

TABLE 1. Per Cent of Various Ingredients in Feed Mixtures Used

Lot No.	1*	2 and 3	4 and 5	6 and 7
Concentrate:Roughage	(65:35)†	70:30	55:45	40:60
Ingredient—				
Ground snapped corn	79.0	75.0	53.6	32.1
Cottonseed meal (41%)	15.0	12.5	12.5	12.5
Blackstrap molasses	6.0	5.0	5.0	5.0
Coastal Bermuda hay	ad lib.	7.5	28.9	50.4

*Grain mixture and hay fed free choice. †Ratio calculated at end of test.

TABLE 2. Proximate Analysis of Feed Samples Taken During the Trial on "As Fed" Basis

Ration No.	Water	Crude Protein	Ether Extract	Crude Fiber	Ash	Nitrogen-free Extract
1	12.7	12.2	3.0	8.6	3.8	59.8
2	12.8	11.5	2.9	10.6	2.4	58.8
3	11.5	11.2	3.2	10.1	3.8	60.2
4	12.9	11.8	2.6	14.8	4.6	53.2
5	11.2	12.0	3.1	14.1	5.2	54.6
6	12.4	12.0	2.7	19.8	5.7	48.0
7	11.6	12.3	2.8	18.2	5.9	49.8
Hay	11.7	9.8	2.5	29.0	6.5	40.7

TABLE 3. Results of Fattening Steers on Pelleted and Unpelleted Feed Mixtures Varying in Proportions of Concentrates and Roughages

Lot No.	1	2	3	4	5	6	7
Concentrate:Roughage	(65:35)	70:30	70:30	55:45	55:45	40:60	40:60
	Free choice hay & grain	Ground & mixed	Pelleted	Ground & mixed	Pelleted	Ground & mixed	Pelleted
No. steers per lot	9	9	9	9	9	9	9
Initial weight, lb.	712	704	720	707	718	712	706
Final weight, lb.	1092	1122	1087	1088	1096	1059	1101
Total gain, lb.	379	418	367	381	378	347	395
Average daily gain, lb.	2.68	2.97	2.60	2.70	2.68	2.46	2.80
Average daily feed consumed, lb.	27.76	26.33	22.12	27.26	24.30	26.07	26.11
Feed consumed per cwt. gain, lb.	1036	887	851	1010	907	1060	933
Cold carcass weight, lb.	644	656	653	642	642	597	619
Dressing percentage*	60.1	59.5	61.1	60.1	59.8	57.5	57.3
Carcass grade†	10.3	10.4	10.2	9.6	10.1	9.2	9.2
Selling price per cwt., dollars	26.55	26.95	27.05	26.67	26.00	25.13	26.10
Feed cost per cwt. gain, dollars‡	21.10	19.02	21.23	20.56	21.65	20.46	21.27
Margin per steer above steer and feed costs, dollars¶	16.16	30.56	20.09	19.35	7.89	1.99	11.23

*Calculated from sale weight (final test weight less 3%) and cold carcass weight.
†Numerical rating for carcass grades: 9—low good, 10—good, 11—high good.
‡Feed prices used: Ground snapped corn, $40 ton; cottonseed meal (41%), $72 ton; blackstrap molasses, $33 ton; Coastal Bermuda hay, $20 ton; ground Coastal Bermuda hay, $30 ton; pelleting charge, $7 ton.
¶Steers valued at $26 per cwt. as feeders.

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THE B&L COMPLETE MOBILE FORMULA FEED BLENDER
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Here's the modern mobile feed plant that grinds, mixes, and blends — produces any formula feed right at the barn door. It carries a full day's supply of molasses and supplement, and features micro-ingredient supplement and medicant mixing . . . high speed molasses blending. Top quality feeds from farm grains and roughages.

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The first practical mobile baled hay grinder grinds round and square bales with equal ease.

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B&L BARNARD & LEAS Manufacturing Company INC.

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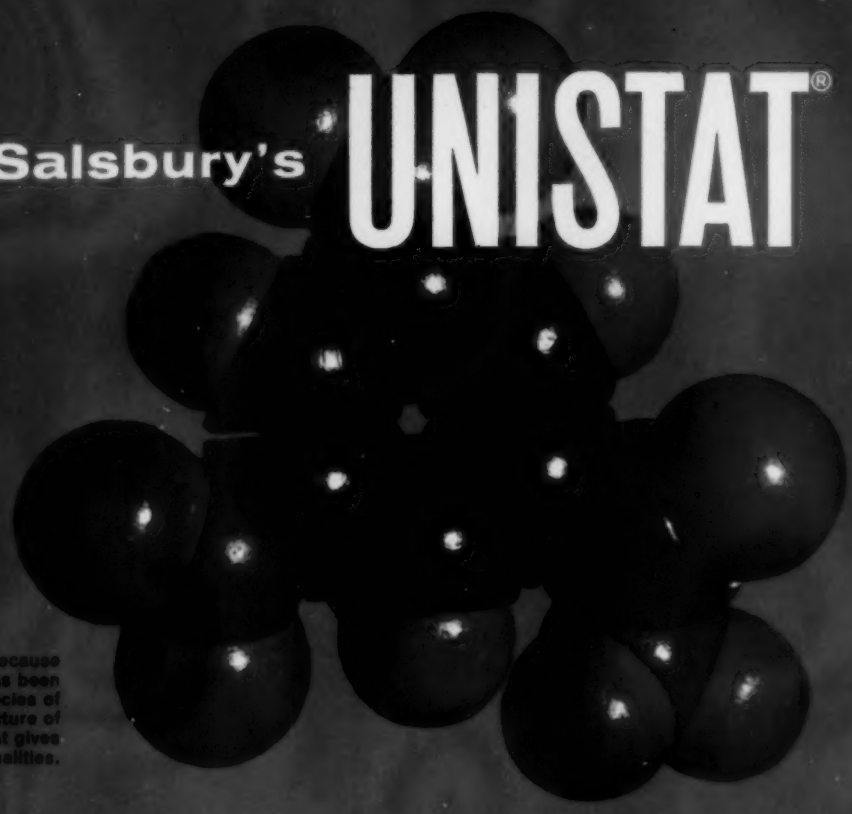
INCREASE YOUR TONNAGE

with additives that increase feed efficiency

Feed manufacturers and dealers alike are vitally interested in feed products that not only improve poultry and swine health but do so at a *substantial profit brought about by increased feed efficiency.*

This brochure describes several such products from Dr. Salsbury's Laboratories, where the practical side of farming is of primary concern. Their use can increase your tonnage, by giving your feeds new profit benefits.

Dr. Salsbury's UNISTAT®



Unistat contains a combination of active ingredients because no compound, complex or other single chemical entity has been found to be equally effective against all important species of coccidia in chickens. Shown above is the molecular structure of *3, 5-Dinitrobenzamide*, the unique new chemical that gives Unistat its superior coccidiostatic qualities.

Unistat is a yellowish, free-flowing powder that blends easily and is compatible with all normal feed ingredients. It provides a "balanced protection" against the economically important forms of coccidiosis. Chemically, Unistat is a unique combination of active ingredients—drugs chosen for their specific effect in complementing each other. They work together as a team to provide far more disease protection and profit benefits than any single drug, chemical complex or compound. Unistat is recommended for **coccidiosis prevention, growth stimulation, improved feed efficiency** and **better pigmentation** in chicks and growing chickens. Best of all, its low cost and small dosage (1 lb. per 1,000 lb. of an all-mash ration) combine to make it one of the least expensive coccidiostats. Follow directions fully.

For Chicks,
Broilers, Growing Chickens

PREVENTS COCCIDIOSIS BEST PLUS OTHER PROFIT BENEFITS

- **INCREASES FEED EFFICIENCY**
- **STIMULATES GROWTH**
- **PERMITS IMMUNITY TO DEVELOP**
- **IMPROVES PIGMENTATION**

Grower experience is what counts, where a feed additive is concerned. That is, growers must *know* that Unistat not only controls coccidiosis but does so at *a substantial profit to them.* Then, and only then, should you use it in your feeds. In the last 12 months, Unistat has been fed to *over ½ billion birds.* The following letters are typical of many being received at Dr. Salsbury's Laboratories from large commercial poultrymen (names on request).

"*Our feed efficiency has improved more than 10 points over last year and coccidiosis is no longer a problem. We feel that the coloring, finish and quality of our birds has been greatly improved with Unistat. We are now using it in our ration 100%, but we field-tested a number of coccidiostats before making this change.*" (This grower raises a million birds a year).

"*This is the first flock of broilers I have ever grown without trouble from coccidiosis. They also had better color. I am completely satisfied with Unistat.*" (This flock averaged 43 lb. of gain per 100 lb. of feed).

"*Since switching to Unistat, I have had less trouble with coccidiosis, better weights and better feed conversion. My broilers show a definite improvement in color and quality. And medication costs have been less since I began using Unistat than for any comparable period since I've been in business.*" (This operator feeds out an average of 80,000 birds a week).

These Grower Experiences Are Why —

MORE AND MORE FEED MANUFACTURERS ARE SWITCHING TO UNISTAT

GET THE FULL STORY ON UNISTAT

Write, wire or phone for your copy of Dr. Salsbury's Feed Manufacturer's Guide on Unistat. It will tell you more about this new approach to coccidiosis control. Or, ask for a Dr. Salsbury representative to call and personally answer your questions about the use of Unistat in chicken starter, grower and broiler feeds.

Dr. Salsbury's 3-NITRO® for Chickens, Turkeys, Hogs

POWDER

STIMULATES GROWTH,
IMPROVES FEED EFFICIENCY,
GIVES GROWERS MORE
FOR THEIR FEED DOLLAR

Increases egg production

Every year sees a new all-time high in the number of commercial flocks that get 3-Nitro in their feed. Why? *Because experience and tests have shown its use to be highly profitable.* Tests have also shown that laying flocks average a dozen or more extra eggs per hen per year—and on ¼ lb. less feed per dozen eggs—when they get 3-Nitro in all their mash. Broilers have more "bloom"... layers have better health and appearance. There is less morbidity and flock depletion. 3-Nitro is safe, palatable, stable, and compatible with normal feed ingredients. (Follow 3-Nitro directions completely.)

All these . . . are reasons why growers say, "*No other feed ingredient does so much—and costs so little—as 3-Nitro*".

Reduces backfat

Swine raisers recognize 3-Nitro as a most valuable feed additive. Tests at Iowa State have shown that growing pigs average 16% heavier—*on 5% less feed*—with 3-Nitro in their ration. Fewer runts and better finish mean higher market prices. Recently, another important benefit was discovered: further research at Iowa State indicated 3-Nitro significantly reduces backfat, thus improving carcass leanness and enabling farmers to greatly speed up the production of meat-type hogs. With the entire swine industry working toward the leaner pork demanded by consumers, this new benefit is attracting even more farmers to 3-Nitro.

FEED MANUFACTURER'S GUIDE No. 13A answers many questions about the use of 3-Nitro in swine and poultry feeds. Write, wire or phone for your copy. Or, ask for a Dr. Salsbury's representative to call and discuss feed-formulating problems with you personally.

NEW HISTOSTAT®-50

PREVENTS BLACKHEAD BEST IN TURKEYS AND CHICKENS

Histostat-50 is a new formulation using the same proven active ingredient—4-nitrophenylarsonic acid—from the chemical family of compounds universally known for their growth-stimulating properties. Its new formulation permits the active ingredient to do its work more completely and efficiently—especially as birds approach market age or maturity. Histostat has been proven on millions of birds . . . to be the most effective blackhead preventive on the market today. When fed to healthy poults in brooder houses or on range, Histostat-50 provides unequalled protection against this No. 1 turkey disease. Follow directions fully.

Promotes better finish, higher market value

Winning 59 awards at the National Dressed Turkey Show is a remarkable achievement for birds fed Histostat. Of greater importance, however, is the **extra profit** which Histostat helps turkey raisers make. This makes champion birds where it counts—in the profit department. Histostat-50 not only prevents blackhead for pennies a bird but it *helps improve finish and carcass quality so birds bring more on the market.* That's why more and more growers are asking for Histostat-50 in their turkey feeds.

There's more to the Histostat-50 story

. . . than we can tell here. Write, wire or phone for your copy of Feed Manufacturer's Guide No. 16. Or, ask for a Dr. Salsbury representative to call and personally answer your questions about using Histostat-50.

- **PALATABLE.** Birds don't back away from Histostat-50.
- **ECONOMICAL.** Even on a continuous program, Histostat-50 costs only a few cents a bird—2 turkeys saved will pay for medication for 100.
- **COMPATIBLE.** Can be used with normal feed ingredients.
- **STABLE.** Histostat-50 is a chemically stable powder—will not lose its effectiveness during handling or storage. Unaffected by pelleting or other feed ingredients.

Dr. Salsbury's POLYSTAT®

A BROAD-RANGE HEALTH PROTECTANT FOR CHICKENS AND TURKEYS

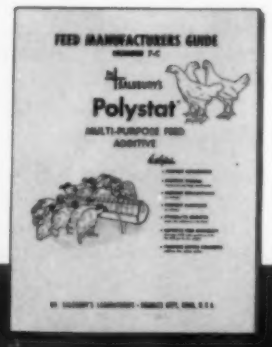
- **STIMULATES GROWTH**
- **INCREASES FEED EFFICIENCY**
- **PROTECTS AGAINST COCCIDIOSIS (all types), LARGE ROUNDWORMS, TAPEWORMS, TURKEY BLUECOMB AND HEXAMITIASIS**

Has Other Values

Polystat is a multi-purpose feed additive specially developed to provide today's poultry with the above much-needed benefits. Chickens and turkeys that get Polystat continuously in their feed grow faster, do better. This is important, but it is not the whole story. Polystat has other values. For example, Polystat reduces the amount of subclinical (inapparent) disease and minimizes the effects of stress. There is less mortality, less sickness and better all-around health and appearance, when feeds contain Polystat. In addition, Polystat eliminates the need for a separate coccidiostat, a separate wormer, and a separate growth stimulant in the feed. Follow directions.

Yes, there are many reasons for including Polystat in your chicken and turkey feeds. However, they all add up to the fact that today's poultrymen demand feeds that prevent a wide variety of diseases and conditions. **Polystat** is such a product . . . **a broad-range health protectant** that *cuts production costs, builds better birds, increases profitable returns.*

WRITE, WIRE OR PHONE . . . for more information about how to use Polystat to build superior poultry feeds. Ask for Feed Manufacturer's Guide No. 7-C. Or, ask for a Dr. Salsbury's representative to call in person.



Dr. Salsbury's WORMAL

THE ONLY COMPLETE POULTRY WORMER

Takes the guesswork out of hit-or-miss worming

Millions of dollars will be lost by growers next year, due to many species of poultry worms. Stopping roundworms is only a small start. A complete worm-control program requires a wormer that "gets all 3"—**tapeworms** and **cecal worms** as well as **large roundworms.** Unfortunately, no single drug is equally effective against these 3 major types of worms. And few growers are skilled at posting or diagnosis, so that the kind of worms might be incorrectly identified. Thus a grower runs the risk of wasting money by using the wrong worming compound. All this spells out the need for a complete, broad-range wormer—one that gets all 3 types of worms. Wormal is such a wormer. *It is the only wormer that gets all 3*—takes the guesswork out of worming!

Other advantages of Wormal

1. **Easy to handle.** Wormal Granules are crumblized for easy mixing or may be added to feeds prior to pelleting.
2. **Easy to feed.** Wormal fits most feeding programs—all mash, or controlled mash-and-grain.
3. **Wormal is safe,** causing no shock or setback.
4. **Palatable.** Feed mixtures containing Wormal are readily eaten by chickens and turkeys.
5. **One standard dose.** One pound of Wormal treats 250 birds of any age. Mix at rate of 20 lb. per ton of mash.

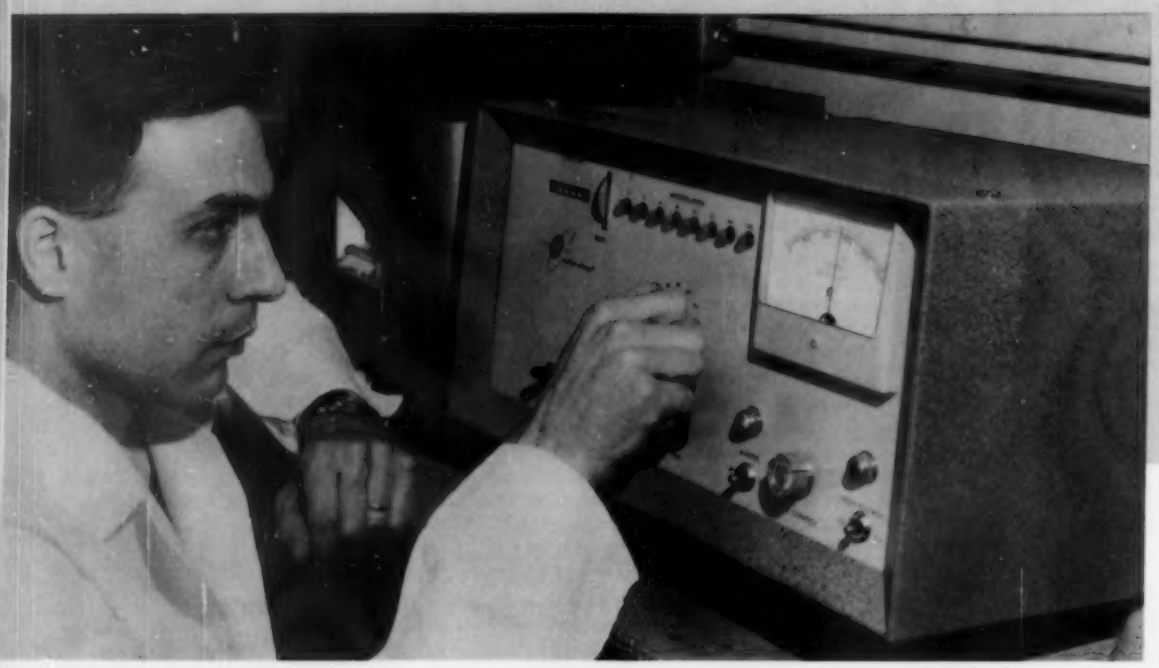
FOR...COMMERCIAL FLOCKS, UTILITY FLOCKS, AND TURKEYS

FIND OUT NOW ... more about Dr. Salsbury's Wormal. Write, wire or phone for Feed Manufacturer's Guide No. 17 and 12-page booklet (shown here) on "How to make and merchandise your own worming feed for poultry". Or, ask that a Dr. Salsbury representative call in person. He'll be glad to show you how the new Wormal promotion plan can help you sell more feed.

ground snapped corn, cottonseed | also reduced their feed intake. All |

SEARCHING...

for better ways to serve the Feed, Poultry and Swine Industries



Strong as they are today, tomorrow's feed, poultry and swine industries will be even more efficient, due to around-the-clock research now going on in laboratories and experimental farms all over the country. Modern feed-additive health products are constantly being improved or replaced by new ones. Competition is a fact of life—in our free economy. Thus the search goes on, because today's best is never quite good enough for tomorrow.

As you know, thorough testing is a vital part of all new product development. Shown above is an atomic scaling unit—part of the apparatus used at Dr. Salsbury's Laboratories for the radio-active tracer testing of drug residues. Such techniques are typical of our never-ending search for better products and for better ways to serve those industries whose destinies we share.

No attempt has been made in the preceding pages to "cover all bases" on the subject of increasing feed tonnage through the use of superior feed additives. It is too big a job. Besides, most feed-formulating problems can best be solved on an individual basis only.

We invite your inquiry concerning any of our many products and services. We hope to serve you better . . .

Dr. SALSBURY'S LABORATORIES
Charles City Iowa

NATIONWIDE SERVICE TO THE FEED INDUSTRY

ground snapped corn, cottonseed meal, blackstrap molasses and Coastal Bermuda hay. In calculating the proportions of the various feed ingredients, the ground snapped corn was considered as 70% grain and 30% roughage. The percentages of the various ingredients used in the mixtures are given in Table 1. Proximate analysis of samples of these mixtures taken during the trial are given in Table 2.

All the hay used in the trial was produced at the Coastal Plain Experiment Station. The unpelleted complete mixed rations were coarse ground through a hammermill using a 9/16 in. screen. The pelleted mixed rations were ground through a ⅛ in. screen and made into 10/64 in. pellets by a commercial feed mill.

The hay used in the pellets was first ground through a ¼ in. screen and then a ⅛ in. screen in order to reduce the grinding time necessary to put the material through the smaller mesh screen. According to information from the feed mill operators, the maximum temperature attained during the pelleting process was 120° F.

All steers were implanted with two 15 mg. pellets of diethylstilbestrol at the beginning of the experiment. The steers were fed once daily as much as they would clean up before the next feeding. A complete mineral mixture was available free choice.

Single individual weights were taken at the beginning, end, and at 28-day intervals throughout the trial. At the end of the trial the steers were sold by lot on the basis of off-test weight, less a 3% shrink. Individual carcass information was obtained after slaughter. The feeding study was started Oct. 16, 1958, and was completed March 6, 1959, a period of 141 days.

Results and Discussion

The results of this feeding trial are given in Table 3.

When the test began the steers were changed abruptly from a maintenance ration of long hay to the experimental rations. The steers were started on about one half full feed and brought up to full feed in 3-4 weeks. All steers consumed their respective rations readily the first few days.

On the fifth day of the trial, the consumption of the steers in Lot 3, the high concentrate pelleted feed, dropped sharply and the steers in Lot 5, the medium concentrate level, also reduced their feed intake. All other lots, including Lot 7 on the high roughage pelleted feed, continued to take their allotted amounts readily.

In order to get Lots 3 and 5 back on feed, long hay was offered to all three lots on pellets beginning on the seventh day of the trial. Each steer in these lots was allowed about 5 lb. of hay. The steers in Lot 3 consumed their hay readily, those in Lot 5 less readily, and the steers in Lot 7 were not interested in the hay.

Almost immediately appetite for the pellets returned. The hay allowance for Lots 3 and 5 was reduced each day, and after seven days it was eliminated. Because of the initial feed consumption problem with Lots 3 and 5, all lots were restricted to approximately the amount of feed consumed by Lot 3 for the first three weeks of the test only.

During the study it was noted that the steers on the finely ground pelleted feed ruminated only occasion-

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CAN AN EMPLOYEE CLAIM A LOWER-RATED JOB ON THE BASIS OF SENIORITY ?

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SORRY, CHARLIE. WE GAVE IT TO YOUNG BOB LEE.
GOSH CHARLIE, YOU'VE GOT SENIORITY. BOUNCE THE GUY!
SURE, THEY HAVE TO GIVE IT TO YOU.
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WE NEED CHARLIE WHERE HE IS.
ARBITRATOR'S DECISION
NO, SENIORITY IS A FACTOR IN PROMOTION UP THE JOB LADDER. PERSONAL DESIRES NEVER TURN A REDUCTION IN GRADE INTO A PROMOTION.
Based on a 1959 Pennsylvania Decision

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With ocean-fresh Redfish meal, condensed Redfish solubles (both processed from edible fish) and other superior ingredients Gorton's Blends supply *all* the essential vitamins, amino acids, antibiotics and unidentified growth factors your feeds should have — *all* in one bag for easy and accurate mixing.

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ally or not at all. For eight consecutive days in the last 28-day period of the trial, observations were made in the afternoon, about eight hours after feeding, on the number of steers in each lot which were actually ruminating.

The total number for the eight days for the various lots were: Lot 1, 11; Lot 2, 16; Lot 3, 0; Lot 4, 17; Lot 5, 2; Lot 6, 18, and Lot 7, 5. Observations made at other times of day failed to alter this relationship between the various lots.

On the whole good gains were made by all lots of steers. Gains of steers on the ground and mixed complete rations decreased as the proportion of roughage was increased. The reverse was true for the pelleted rations, i. e., the gains increased as the proportion of roughage increased. Feed intake on the unpelleted mixtures increased slightly, then decreased as the roughage increased.

Feed intake was lowest on the high concentrate pelleted ration but consumption increased as the roughage was increased in the pelleted rations.

When comparing each level of concentrate:roughage, the feed efficiency was greater for the pelleted rations than the unpelleted rations. It is interesting to note that the high concentrate pelleted feed produced a lower gain than any lot except Lot 6 (ground and mixed, high roughage), yet required the least feed per cwt. gain.

On the average, carcass grades and dressing percentages were about the same for the unpelleted and the pelleted lots.

Although no data were obtained on actual shrink, it is possible that the higher dressing percentage and smaller total gain of the steers in Lot 3 as compared to Lot 2 may have been due to less fill for the steers fed the pellets. Both carcass grade and dressing percentage decreased as roughage level increased. Over-all, the cheapest gains and greatest margin over steer and feed costs were made by the Lot 2 steers on the high percentage, low roughage complete mixed ration.

Observations

More experimental work needs to be done before definite conclusions can be drawn concerning the pelleting of feeds for use in steer fattening rations.

From the results of this trial it appears that pelleting a high roughage ration, in which most of the roughage is Coastal Bermuda hay, will improve the performance of steers on this type of ration, whereas pelleting a high concentrate ration does not improve steer performance. Whether or not pelleting a fattening ration and/or using a large amount of roughage will be a profitable practice will depend mostly on economic factors, including cost of feed ingredients, cost of grinding hay, cost of pelleting and spread in price between slaughter steer grades.

A *Lilly* MESSAGE TO THE MAN WHO WANTS TO SELL MORE FEED

These 13 college tests show how Hygromix helps good feeds do their best

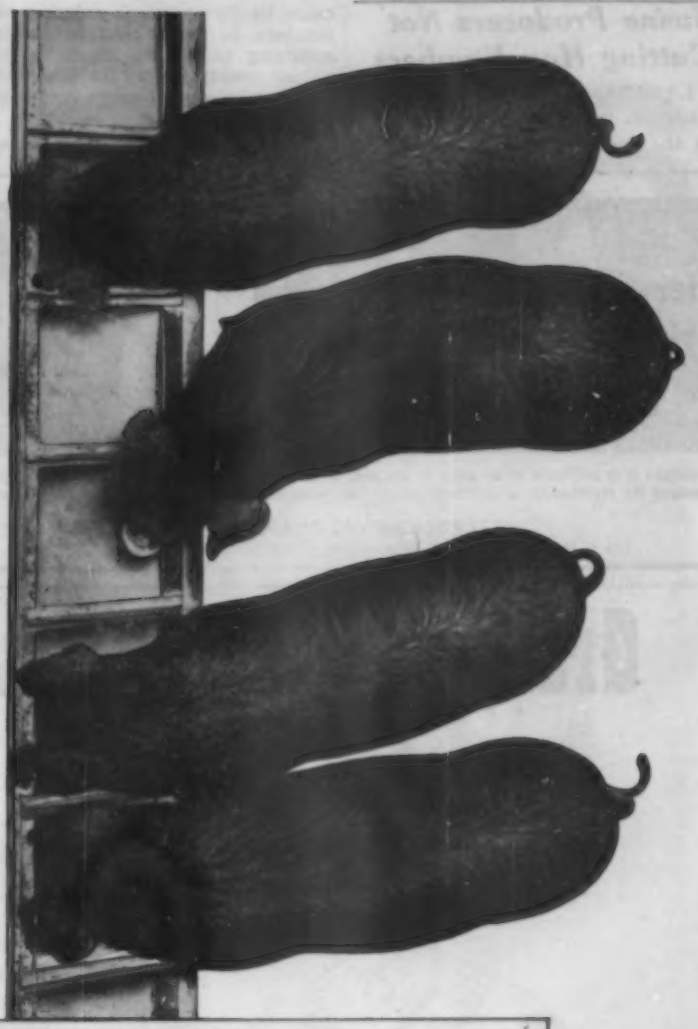
Swine worms take their toll from the performance of any feed. Notice how continuous worm control helped these swine rations produce faster gains on less feed.

Before Hygromix was discovered, experts agreed that swine worms cost the farmer with hogs from 7 to 10% in lost gains and feed.

This loss to the hog raiser *can also be considered as an apparent loss of nutritional value* . . . from your feeds!

The results of these college feeding trials, and the evaluations of Hygromix as an anthelmintic, prove the benefits of day-by-day worm control.

Insure your good feeds against this hidden loss to hungry, damaging worms. Help your feeds deliver full nutritional power to hogs during their critical growing period.



HYGROMIX SWINE-FEEDING DATA FOR THE GROWING PERIOD

Station	Avg. No. Pigs Per Treatment	No. Days on Test	Average Starting Weight		Reported Progress Wt. Nearest 100#		Avg. Daily Gain		Feed Required Per Pound Gain		% Inc. Daily Gain	% Decrease Feed Required
			Control	Hygro.	Control	Hygro.	Control	Hygro.	Control	Hygro.		
Ohio (Drylot)	8	70	35	35	132	141	1.37	1.51	3.22	3.01	10.2	6.5
Ohio (Pasture)	20	56	38	38	118	123	1.42	1.51	2.81	2.79	6.3	0.7
Nebraska (Drylot)	19	76	38	38	135	138	1.27	1.37	3.53	3.26	7.9	7.6
Nebraska (Pasture)	19	76	37	39	146	160	1.42	1.59	2.99	2.90	12.0	3.0
Purdue (Drylot)	11	42	37	37	88	94	1.22	1.36	3.40	3.22	11.5	5.3
Purdue (Concrete & Soil)	10	49	32	32	84	84	1.05	1.06	3.03	2.95	1.0	2.6
Purdue (Concrete)*	10	49	32	32	93	99	1.24	1.35	2.86	2.85	8.9	0.3
N. Carolina (Concrete)	43	56	38	32	107	95	1.23	1.12	3.51	3.28	−8.9	6.6
N. Carolina (Pasture)	44	56	36	32	100	94	1.10	1.10	3.28	3.05	0.0	7.0
S. Dakota	24	39	45	45	101	106	1.43	1.61	2.99	2.74	12.6	8.4
Uni. of Alberta*	8	31	14	14	38	42	.79	.91	2.05	1.91	15.2	6.8
Uni. of Alberta	8	31	14	14	38	44	.77	.96	2.23	1.95	24.7	12.6
Michigan State	18	89	31	31	121	121	1.36	1.41	3.20	3.00	3.7	6.2
										Average of tests:	8.1	5.7

*Pigs in these lots were wormed once with purge-type wormer.

HERE ARE EXCERPTS FROM SUMMARIES MADE BY EXPERIMENTERS AT STATE COLLEGES ABOUT THE EFFECTIVENESS OF HYGROMIX

Purdue . . . Hygromycin effectively controlled roundworms, nodular worms, and whipworms, as shown by ova counts taken and by worm counts obtained at slaughter. *Purdue Swine Day—Mimeo A. S. 242, August, 1958*

Nebraska . . . Hygromycin B is highly effective and more nearly meets the requirements of an ideal wormer than any of the former compounds. *"Worm Eggs Cost You Money"—University of Nebraska, E. C. 1902*

Ohio State . . . The reduction in the number of ascaris (roundworm) and nodular-worm ova in the treated groups would indicate that this feed additive (Hygromix) is very effective in the elimination of these internal parasites of swine. *Swine Day, 1957—Animal Science Mimeo 106*

Wisconsin . . . Hygromycin hits harder than other drugs. The new drug gets whipworms, which no other drug has been able to touch. It acts partly by blocking reproduction of the parasites . . . an ideal way to stop the worms before they do the damage. *Press Release—University of Wisconsin, December 16, 1957*

South Dakota . . . Hygromycin controlled roundworms effectively, as there were no roundworm ova present in the feces of any pigs receiving either hygromycin or the combination of hygromycin and chlorotetracycline. *Swine Field Day—September 11, 1958*

Missouri . . . Hygromycin was effective in reducing the roundworm egg count. *"The value of various antibiotics for growing fattening swine" Swine Day—September 5, 1958*

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Swine Producers Not Cutting Hog Numbers

LAMESA, TEXAS — Swine producers in this area have more faith in the future than poultrymen because hardly anyone is reducing hog numbers or going out of business, according to DeLacy Frampton, assistant county agent. He said there has been a steady expansion of hogs, despite lower prices.

"Farmers are realizing that very little can be made by selling maize at $1.50 a hundred," Mr. Frampton said. "By putting it through hogs, this grain can be marketed at a nice profit. The only drawback is that not enough farmers are using their own grain. They are buying a complete feed, whereas by grinding their maize and mixing with a supplement, they could make more money."

One trend has been toward larger units, Mr. Frampton explained. Several farmers have put in modern farrowing houses, automatic feeders and waterers, and are thus reducing overhead and labor.

"Whenever a price slump came along before, farmers would start selling off their breeding stock," Mr. Frampton said. "Now they are realizing that the only way to make money with hogs or any kind of livestock is to stay with it year after year and do a good job of management."

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Importance of an Egg Producer's Location Stressed by Feed Man

ODESSA, TEXAS—The difference between a small poultryman staying in business or quitting may sometimes be determined by his location. If he lives near a good town, he can often create an egg business that no outside competitor can reach.

This is the opinion of J. M. Henderson, owner of the Ranch Supply Co. His firm furnishes feed for several small producers.

"Odessa has about 90,000 people," he said, "and most of the eggs are trucked in by the big poultry companies. Yet we have a few producers who sell their eggs to cafes and on residential routes. These people have been getting a nickel or dime more than anyone else. One or two of them never sold under 50¢ a dozen since they started."

Practically all these producers feed a complete feed, put in labor-saving equipment and do a good job of managing, according to Mr. Henderson. One mistake some poultrymen make, Mr. Henderson says, is in getting too big. They are urged to do things in a big way, and soon overreach their market.

"There is no reason why a man can't continue to make a profit with 1,000 to 3,000 hens," said Mr. Henderson, "if he can keep his retail market. When he gets so big he must find an outlet in another town, then he becomes another 'outsider' and is forced to compete with poultrymen from other areas."

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Grandma's recipes were a pinch of this and a dibby-dab of that.

That was fine for Grandma. But it won't work in process blending. Here, you need precise control, minute-to-minute accuracy, exact formulations.

And you get just this and more with W&T's Merchen Scale Feeders and Meters. They control or measure feed rates by weight. There's no guess work. You get exactly what you set the equipment for . . . yields are known; quality is controlled.

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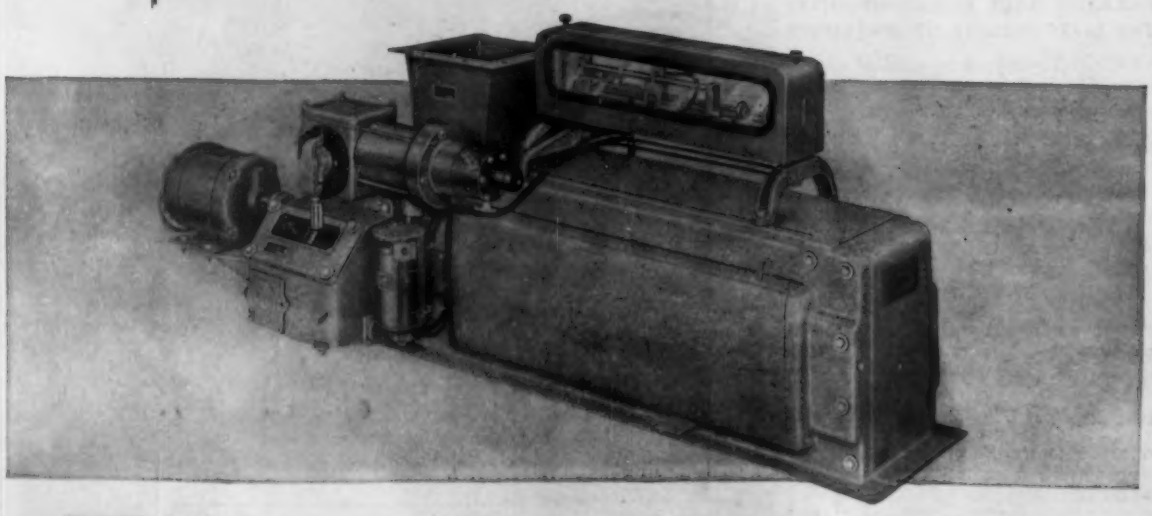

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B. D. Barnett Heads Clemson Poultry Unit

CLEMSON, S.C. — Dr. Bobby D. Barnett has been named head of the Clemson College poultry department, according to Dr. M. D. Farrar, dean of the Clemson School of Agriculture. Dr. Barnett succeeds C. L. Morgan, who retired as department head June 30. J. B. Cooper, associate poultryman, has been acting department head the past two months.

Dr. Barnett came to Clemson July 1, 1956, as nutritionist with the South Carolina Experiment Station and has conducted research in nutrition dealing with unidentified vitamins, antibiotics, amino acids, proteins, fats and toxic feed ingredients. He was promoted from assistant poultryman to associate poultryman July 1, 1958.

A native of Elm Springs, Ark., Dr. Barnett was graduated from the University of Arkansas with a degree in agriculture in 1950. He also holds a master's degree from the University of Arkansas and a Ph.D. degree from the University of Wisconsin.

For two years, 1950-52, Dr. Barnett owned and operated a hatchery at Springdale, Ark.

Doane Opens Office In Lincoln, Neb.

ST. LOUIS—The Doane Agricultural Service, Inc., has opened its 35th branch office in the Sharpe Building in Lincoln, Neb.

J. Herbert Hartley, field editor for the western and Corn Belt editions of the Doane Agricultural Digest has been transferred to Lincoln from the home office at St. Louis, Missouri. Mr. Hartley is also editor of the Great Plains edition of Farming for Profit, a monthly farm management report distributed by banks and business firms.

Plans are being made to transfer men from two other divisions of Doane to the Lincoln office.

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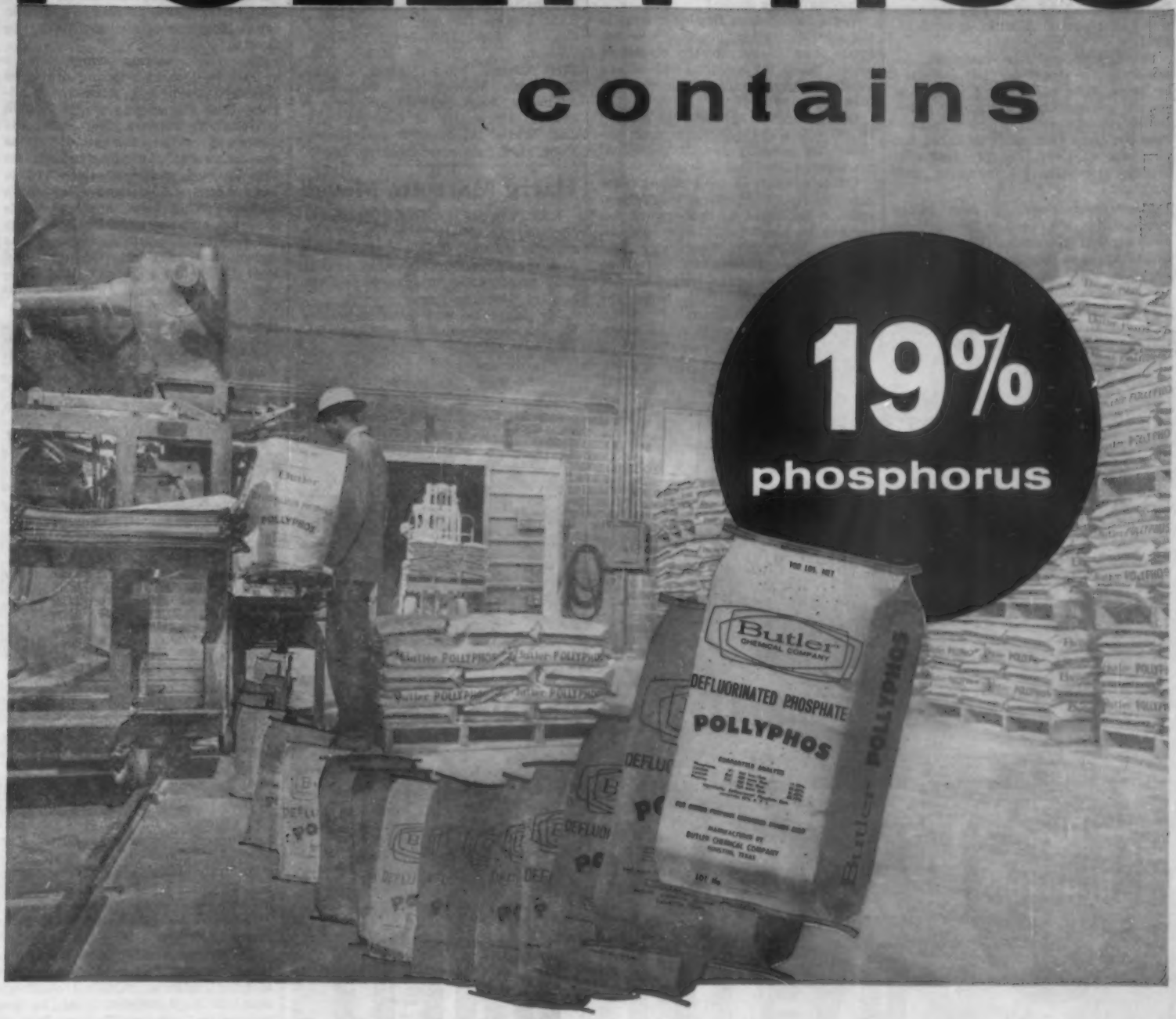

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'Face the Facts' To Be Theme of Southeastern Event

ATLANTA—"Let's Face the Facts" was selected by the program committee as the theme for the annual Southeastern Poultry & Egg Convention to be held in Atlanta Jan. 25-27, 1960.

Program committee members, in stressing the need for the industry to be realistic and factual in its approach to its problems, mapped plans for the Southeastern program to provide the facts that must be faced for economic survival. The program will feature the following subjects and purposes:

Marketing: Facts on how other commodities are meeting production-consumption problems, the penalties of selling on a buyers' market, being realistic with the retailers, getting the retailer views, new products, has poultry lost some of its glamor?

Sound Credit: The facts on what the banks and feed manufacturing companies are doing in the field of finance.

Tools for Making True Cost Analysis: The facts on the "true" cost of doing business and what you have to know before you get a realistic answer.

Personnel Development: Job evaluations and employee training.

Factors That Affect Egg Quotations: Are the facts known when quotations are made, is the market made by a few traders, are southern eggs receiving a fair shake?

What Determines Broiler Prices: Is the formula used by processors sound, farm price in relation to consumer price, does the information that's available for forecasting function effectively?

Government Programs: The history of controls and their effects upon the controlled industry and the individual producer.

Other subjects in the business management field and poultry health panels will be added to the agenda, according to J. M. Tankersley, committee chairman. Mr. Tankersley also reported that the turkey committee would meet to plan its program, which runs concurrently with the broiler and egg program.

Members attending this first meeting of the Southeastern Poultry & Egg Assn. program planning committee were: Joe Tankersley, chairman, Twin Oaks Hatchery, Gainesville, Ga.; Henry C. Tilford, Jr., Dixie Grain Co., Shelbyville, Tenn.; M. V. Williams, producer, Friendship, Tenn.; Paul Thomas, Southeastern Turkey Ranch, Sumter, S. C.; Vic Pringle, Rockingham Poultry Marketing Cooperative, Broadway, Va.; Bill Garth, Garth Milling Co., Pelahatchie, Miss.; Julius Bishop, Bishop's Hatchery, Athens, Ga.; Stan Marshall, Marshall Farms, Belton, S.C.; Dennis Ramsey, Ramsey Feed Co., Inc., Rose Hill, N.C.; Dr. John Weeks, Cosby-Hodges Milling Co., Birmingham, Ala.; Merlin Bryant, Brundidge Milling Co., Brundidge, Ala.; Dr. Sam Schmittle, Research Center, University of Georgia, Athens; Walter Henderson and Harold Ford, staff members, Decatur, Ga.

Harry Marcotte Moved

EXETER, N.H.—Harry Marcotte, Nichols, Inc., salesman, has been transferred to Tyler, Texas, according to a recent announcement by Leo H. Estabrook, sales manager for the poultry breeding firm.

Mr. Marcotte will cover Arkansas, Kansas, Louisiana, Mississippi, southern Missouri, Oklahoma and Texas. He has been with Nichols at the headquarters in Exeter for six years.

To Discuss Contracts, Poultry Trends at Indiana Convention

LAFAYETTE, IND.—The 41st annual meeting of the Indiana State Poultry Assn. with its various departments will be held in Indianapolis, Hotel Severin, Oct. 27-28, advise Floyd Strickland, president, and Robert L. Hogue, executive secretary, Lafayette.

The fall program committee is headed by Robert Schram, first vice president, Peru, Ind. Mr. Schram advises that the speakers will include Dr. Carl S. Winters, Oak Park, Ill., discussing "Your Human Relations Are Showing." Other speakers on Tuesday will include Arthur Atwell, Indianapolis, discussing "Indiana's Right to Work Law" and how it affects agricultural organizations; Gerald L. Wilkin, poultry editor, Doane Agricultural Service, "Figures and How to Figure Figures"; Ray Firestone, vice president, American Poultry & Hatchery Federation and National Broiler Council, Troutville, Va., "The Poultry Industry and Re-adjustment—Broilers Back to the Midwest?"

Tuesday evening the annual banquet will highlight a special poultry menu.

Wednesday morning special consideration will be given to contracts and contract farming as it pertains to the poultry industry. This will be handled by Prof. N. G. P. Krausz, University of Illinois. This will be followed by a panel on "Facts, Fancy and Failure of Contracts."

Lt. Gov. Crawford Parker, Indiana commissioner of agriculture, will discuss "Indiana and Its Poultry Industry."

On the Wednesday afternoon program two sessions will be going concurrently, one featuring egg production handled by the egg council section and the other by the broiler department. Purdue Broiler Day, formerly held on the Purdue campus, will be held in conjunction with the state meeting this year.

Highlighting the broiler section will be Dr. L. A. Wilhelm, Quaker Oats Co., Chicago, "Improving Your Odds for Success in Broilers," and Dr. Ken May, University of Georgia, "Production Requirements to Meet Inspection Processing." A special report will be given by Jim Vannice, miidwest representative, National Broiler Council.

The egg production section will feature Dr. S. A. Edgar, Alabama Polytechnic Institute, "Control of Coccidiosis in Replacement Stock by Immunization"; Ralph Thomas, DeKalb Agricultural Assn., president, Poultry and Egg National Board, "New Opportunities in Egg Promotion"; Ed Menefee, executive secretary, Indiana State Egg Board, "Indiana Fancy Fresh Egg Program," and Ray Wilson, Indiana Farmer Retailer Committee, "Seal of Quality for Eggs."

A special meeting is planned for Wednesday evening, Oct. 28, for the Indiana poultry processors section to meet with Dr. Ken May, University of Georgia, and discuss the new use of tranquilizers in the processing field.

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'Success and Survival' To Be Theme of Turkey Convention

MT. MORRIS, ILL. — "Operation S & S" is the general theme for the program at the National Turkey Federation convention to be held in Minneapolis Jan. 5-7, 1960, according to an announcement from NTF officials.

The "S & S" stands for "Success and Survival." It is the opinion of the NTF convention program advisory committee that turkey producers are divided into two general classes—those who are highly successful, even with the intense competition and low unit margins of today; and those who are having difficulty surviving—or will have — and are interested in knowing what they need to do to improve their operations and increase profits.

The program advisory committee, meeting at the NTF headquarters office in Mt. Morris, spent a full day developing detailed plans. Committee members are Dr. J. Holmes Martin (chairman), head poultry department, Purdue University, Lafayette, Ind.; G. E. Annin, extension poultry specialist and secretary of the Wisconsin Turkey Federation, Madison, and John W. Hough, editor, Turkey World, Mt. Morris.

Following this theme, the NTF president, Walter W. Schwedler, Portland, Ore., will open the general sessions with his message stressing the accomplishments of the federation and the direction he believes necessary for the organization and the industry to continue its growth and success.

Next on the program will be an address by David L. Hume, director, poultry and dairy division, Foreign Agricultural Service, U.S. Department of Agriculture, Washington, D. C. Members of the program advisory committee are of the opinion one of the greatest opportunities for expansion of the U.S. turkey industry is in developing foreign markets.

This will be followed by a panel on the subject, "Does the Turkey Industry Want Mandatory Grade and Sex Labeling?"

Wednesday afternoon's general session, Jan. 6, will deal with business and production management.

Thursday afternoon will have two features—the turkey disease clinic, and the traditional convention program, closing with Dr. W. A. Billings "just talking turkey."

Morning sessions will feature specialized clinics. The most specialized and technical of all will be the research clinic led by Dr. Cliff D. Carpenter, chairman, NTF Research Advisory Committee. Other morning clinic subjects will include turkey promotion and merchandising, breeder management and pattern for success of the grower-processor.

Feed Firms in Court Action in Delaware

WILMINGTON, DEL.—The Court of Chancery here has been asked to determine the amount of monetary judgment and to set the effective date of termination of an agreement between the Ralston Purina Co., St. Louis, and the Rodney Feed Co., Millsboro, Del., as Sept. 4, 1959, for purposes of accounting and settlement.

It is claimed in an action filed in Chancery that the two parties to the suit had entered an agreement in September, 1958, on poultry raising.

Plaintiffs say that on June 2, 1959, they notified of termination and they state that this would make the termination day Sept. 4, 1959. It is asserted that on July 23, 1959, Rodney Feed Co. advised them of rejection of the notice of termination.

The court is asked to declare that there be an accounting on all flocks laid down, matured and sold from time of notice to Sept. 4, a period of three months.

Turkey Show Dec. 4-5

BERRYVILLE, ARK.—The Arkansas Turkey Federation will hold its 10th annual Turkey Convention & Show here Dec. 4-5, according to Roy Ritter, president.

Turkey producers will hear poultry experts discuss the latest developments in turkey production and marketing problems.

Entries in the live turkey show will be judged the first day, according to Lowell Lankford, extension poultryman. These birds will be processed and judged as fresh dressed birds the following day.

New officers and directors will be elected at the annual meeting Dec. 5.

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U.N. Unit Issues Health Year Book

ROME, ITALY—The first issue of an Animal Health Year Book, containing information from more than 100 countries and territories on animal disease and disease-control measures, has been issued by the Food and Agriculture Organization of the United Nations.

The year book, prepared jointly by FAO and the Office International des Epizooties (OIE), was drawn up on the basis of a questionnaire sent to FAO and OIE member governments, asking particulars of the occurrence of diseases in an established list, their duration in the country and their intensity. The diseases covered included those of economic importance as well as those which are infectious.

Although the information related to 1958 is issued as a year book for the first time, FAO and OIE last year published, in the form of a report to member countries, the results of a questionnaire circulated to veterinary services for 1957. It is planned now to issue the book annually.

FAO officials have expressed the hope that the year book data and the action which might subsequently be taken would contribute considerably to the improvement of human and animal health. The report, they said, will be particularly useful to veterinary authorities when imports of animals or animal products are being considered, or where traffic of animals into or through a country takes place.

The officials also said that a coding system used throughout the book will assist governments in analyzing the data. Fed into IBM machines, the information should in the long run reveal cyclical trends of diseases and enable governments to forecast the future evolution of diseases.

Tube Bending Firm Established in Tulsa

TULSA, OKLA.—Tulsa Tube Bending, Inc., a production bending plant for the manufacture of thin wall bends of pipe and tubing used for pneumatic conveying systems in grain handling installations and flour mills, has been established here, according to L. C. Skinner, president.

The company specializes in the manufacture of thin wall bends of pipe and tubing from ⅛" through 8" in diameter in a variety of wall thicknesses and radii.

S. C. Reports Test on Hog Supplement Pellets

CLEMSON, S.C. — A pelleted protein supplement for hogs gives more gain from less feed, results of one year's work at Clemson show. Experiments by the animal husbandry department show that hogs fed pelleted protein supplement containing Coastal Bermuda grass outgained hogs fed the same ration in meal form.

Dale L. Handlin, assistant animal husbandman at Clemson, has obtained gains of 1.60 lb. per day from a pelleted supplement fed free choice with shelled corn. The pelleted supplement contained one fourth Coastal Bermuda meal, one fourth soybean meal and one half fish meal. This treatment gave the best gain in the test.

When alfalfa meal replaced the Coastal Bermuda meal in the pellets, the average daily gain was 1.59 lb.

In a nonpelleted Coastal Bermuda ration which had the same amount of fish meal and soybean meal as the pelleted ration, the daily gain was 1.49 lb. Mr. Handlin thinks feed wasted by the hogs in the meal form accounts for some of the difference in the amount of feed it took per 100 lb. of gain.

Another pelleted supplement showed up better than the Coastal Bermuda meal in the test. It was a supplement of vitamin A premix pelleted in a ration made up of one half fish meal and one half soybean meal. Daily gain from the synthetic vitamin A ration was 1.57 lb.

Shelled yellow corn was fed free choice to all the hogs.

Hogs fed the pelleted protein supplement containing Coastal Bermuda ate less feed than the other test groups fed dehydrated meal. They ate 309 lb. of corn and 46 lb. of pellets per 100 lb. of gain—25 lb. less corn and 21 lb. less supplement than the hogs fed the supplement containing Coastal Bermuda meal.

The difference wasn't quite as great between the hogs fed pelleted supplement containing Coastal and alfalfa. Those on supplements containing alfalfa ate 312 lb. of corn and 59 lb. of pellets.

LIQUID FEED PLANT

PAWHUSKA, OKLA.—A new firm, Northeast Liquid Feed Co., is beginning operations here. The company will produce a new liquid feed for cattle. Jack and Zack Hudson will operate the plant.

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Whole Fish Croaker Meal Equals Fish Meal in Broiler Tests

FAYETTEVILLE, ARK. — On the basis of growth rate and feed efficiency in broiler-feeding trials, whole fish croaker meal compares favorably with fish meals and fish solubles in current use, Arkansas researchers report.

Dr. E. L. Stephenson, animal nutritionist, University of Arkansas Agricultural Experiment Station, reported in a recent issue of Arkansas Farm Research that he found no significant differences in body weight gain or efficiency of feed utilization when he added whole fish croaker meal and other experimental fish meals to a basal chick diet (Table 1) to replace 4% fish meal listed in the basal formula.

Dr. Stephenson wrote in Arkansas Farm Research, the experiment station's bi-monthly magazine: "During recent years the supply of fish meal and fish solubles has decreased while the demand has increased. This has resulted in an increased price, as well as a shortage of supply of some of the more popular products. To circumvent these difficulties certain soybean meal processors have attempted to blend fish solubles or fish hydrolyzates with soybean meal to obtain a satisfactory replacement for fish meal. Also, new species of fish have been studied as feed for chicks."

Dr. Stephenson noted that the experiments conducted by himself and Lionel Barton, research assistant, were designed to study the nutritive value of new species of fish and blends of fish and soybean meal for broiler feed.

Dr. Stephenson and Mr. Barton experimented with 5% of the ration each of Norwegian herring meal, croaker meal and experimental fish meals supplied by commercial companies. (See Table 2.) Fish-En-Soy was supplied by Archer-Daniels-Midland Co., Minneapolis, Minn., and the croaker meal and the two experimental fish meals, B and C, were provided by Bruce Milling Co., Kansas City, Kansas.

TABLE 1. Composition of Basal Diet

Ingredient	Amount to 100 lb. lb.
Yellow corn meal	58.6
Soybean oil meal (50% protein)	25.3
Fish meal	4.0
Dried whole whey	2.0
Dl methionine	.1
Alfalfa leaf meal	2.0
$CaCO_3$	1.4
Dicalcium phosphate	2.0
Salt	0.5
Yellow grease	3.0
	gm.
Nicarbazin	22.7
$MnSO_4$	8.0
B complex vitamin concentrate (2-5-12.5-50)*	25.0
Riboflavin (30 ml./lb.)	1.4
Vitamin A (20,000 USP/gm.)	10.0
Butylated hydroxy toluene conc.	5.7
Procaine penicillin	1.0
	mg.
Vitamin D_3 (200,000 I.U./gm.)	225.0

*Two gm. riboflavin, 5 gm. calcium pantothenate, 12.5 gm. niacin and 50 gm. choline per pound of supplement.

Subheads

Four and Nine Weeks

In the first experiment, chicks were fed to four weeks of age. In the second test, the birds were fed to nine weeks. Conditions of the two experiments also differ in that 5% South African pilchard meal and 10% Fish-En-Soy were added in the second test.

Results showed there was no significant difference in chick body weight gain or feed efficiency to four weeks of age, but the diet containing croaker meal was the most efficient growth promoter in the nine-week experiment.

The experimental fish meals were added to the basal diet at the expense of the fish meal listed in the formula. Fish-En-Soy was added to the formula at the expense of fish meal, soybean meal and corn on an equi-protein basis.

In the first experiment, each diet

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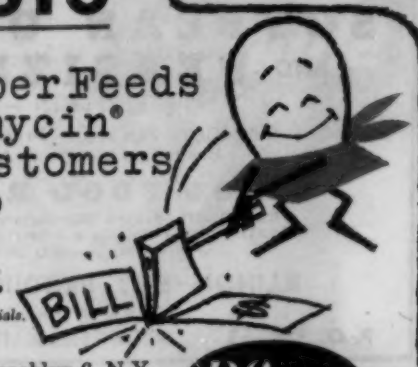

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TABLE 2. Comparative Feeding Values of Different Fish Products for Broilers

Supplement to basal diet	Average weight	Lb. fed per lb. gain
Experiment 1, birds fed to four weeks	gm.	
5% Norwegian herring meal (Fulmeal)	443	1.69
5% croaker meal (whole fish)	435	1.67
5% experimental fish meal B	454	1.65
5% experimental fish meal C	441	1.81
Experiment 2, birds fed to nine weeks	lb.	
1. 5% South African pilchard meal (Fulmeal)	2.81	2.33
2. 5% Norwegian herring meal (Fulmeal)	2.76	2.39
3. 5% croaker meal (whole fish)	2.84	2.27
4. 5% experimental fish meal B	2.72	2.37
5. 5% experimental fish meal C	2.82	2.42
6. 10% "Fish-En-Soy"	2.70	2.37

was fed to four pens of 10 chicks each and the chicks were maintained in electrically heated battery brooders to four weeks of age. In the second experiment, each diet was fed to two pens of 200 chicks each. The birds were maintained on rice hull litter in floored pens for nine weeks.

Cornish X White Rock unsexed chicks were used in both experiments. The experimental diets and tap water were supplied ad libitum.

When the efficiencies of feed utilization found in the second experiment were analyzed, diets 1 and 3 (Table 2) proved to be significantly more efficient in promoting growth than the other diets. Diet 3 was significantly more efficient than any diet except diet 1, and in this case the difference approached statistical significance.

Dr. Stephenson said it was not possible to determine from the experimental data whether the indicated improvement in feed utilization was due to content of essential amino acids, unidentified factors or a combination of the two. "More work is needed to determine the reason for this greater efficiency in feed utilization," he said.

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Researchers Study Feed Industry Role In Integration

AMES, IOWA — A survey of the impact upon and the role of the feed industry with respect to vertical integration or contract farming in the Midwest is being made by the Iowa State University agricultural experiment station in cooperation with the U.S. Department of Agriculture.

In preliminary work, says Richard Phillips, Iowa researcher, it has been found that relatively few feed dealers in Iowa offer contracts themselves to their customers. Those that do, generally finance them through local banks which also provide management service to their customers under contract. Dr. Phillips says the extent of this service appears to vary considerably.

Most of the feed dealers interviewed in the preliminary survey thought that feeder contracts backed by the feed manufacturers would increase their sales of feed somewhat, according to Dr. Phillips. But about half of these dealers also thought that such contracts would increase their expenses more than their returns.

While most of the feed dealers interviewed expressed no strong opinions toward feed contracts, a few were strongly opposed and a few strongly in favor of them, Dr. Phillips reports.

Phil O'Connell Dies

SAN FRANCISCO—Phil O'Connell, 81, organizer and operator of the Phil O'Connell Grain Co. here and in Stockton, died recently.

Mr. O'Connell dealt with potatoes and onions until 1915 when he formed a partnership with J. W. Schuler and Herb Mann to take over the grain business of Frank A. Guernsey of Stockton. The company was known then as Schuler & O'Connell.

In 1921 Eugene Wilkinson, currently head of the Wilkinson Grain Co., bought into the company. In 1939 Mr. O'Connell sold his interests to Mr. Wilkinson, and organized the Phil O'Connell Grain Co.

NEW ELEVATOR

SYRACUSE, KANSAS — A new $500,000 elevator has been built by the Syracuse Cooperative Exchange.

Research Results Discussed at South Dakota Field Days

BROOKINGS, S.D. — Three South Dakota State College agricultural field days recently brought out results of research with organic arsenicals, cattle grub control, restricted rations for steers and the effects of a hormone on turkey growth and finish.

Portions of the material presented follows:

Organic Arsenicals

Field day visitors at the Reed Ranch substation near Presho, S.D., were told that changes of an organic arsenical that would be of practical value in controlling selenium poisoning in cattle appear small at this time.

Dr. Oscar Olson, chemist at the South Dakota State College agricultural experiment station, said there seemed to be a slight beneficial effect from the arsenicals in all trials at Reed Ranch. A small weight gain was noted, but it was not significant statistically. Some reduction in severity of symptoms was also noted, but this effect was small, and rather severe symptoms were observed even in the treated animals.

Getting organic arsenicals to range animals in controlled amounts also poses quite a problem, he said.

Experiments are conducted with cattle in the feedlot and on the range at Reed Ranch. Those dealing with organic arsenicals have been in progress three years.

Cattle Grub Control

Two systemic cattle grub chemicals are on the market now, but more research is still needed in this field, reported Paul H. Kohler, associate animal husbandman with the agricultural experiment station at South Dakota State College, during the annual field day at Reed Ranch.

Mr. Kohler said Co-Ral and ronnel have been shown to be effective in controlling cattle grubs. However, he pointed out that high cost and possible toxic effects to cattle are two disadvantages of the chemicals now on the market.

Co-Ral applied as a high pressure spray at .5% concentration gave 90% grub reduction in 70 calves at South Dakota experiment station substations last year, Mr. Kohler reported. He added that the animals had been thoroughly wetted. In previous tests when animals were not wetted as thoroughly, less control was noticed, he said.

Ronnel, effective as a bolus or pill, had been tested in salt mixtures at the experiment station during the last three years, he said. Consumption of the salt mixtures ranged from .31 to 1.88 oz. per calf per day. Outstanding grub control has been achieved when 40 and 48 grams of ronnel per pound of salt mixture was used for 66 days. However, control was not adequate with 16 grams of ronnel per pound for 28 days, Mr. Kohler pointed out.

"We plan to test several new chemicals this year," he told field day visitors. "One new chemical, Ruelene, looks promising against grubs and some other cattle pests. We plan to test the chemicals as sprays, salt and feed additives and injections. Besides grub control, we will check weight gains, blood levels and other physiological factors in the cattle."

Restricted Rations

Steers on restricted energy and protein rations their first winter reached a 1200-lb. market weight as soon as those on more liberal rations in trials at the Cottonwood and Eureka substations of the South Dakota State College agricultural experiment station.

Dr. L. B. Embry, of the State College animal husbandry department, told field day visitors at Cottonwood and Eureka that the steers that gained the least during the winter made the fastest gains through the summer grazing season.

The trials are designed to determine the protein and energy requirements of beef cattle for different rates of production. Three phases are being studied — wintering, summer grazing and fattening. The effect of performance in one phase on the performance in a later phase is also being determined.

In the wintering phase, alfalfa and prairie hay were fed in different rations and at different intake levels to produce various protein and energy levels. Next the calves were grazed through the summer and then placed on a fattening ration for the final phase.

During the wintering phase, restricting protein and energy reduced growth and affected the general appearance of the calves markedly.

Dr. Embry said that feed per 100 lb. gain decreased as protein intake was raised and increased as the energy level was reduced. Feed cost per

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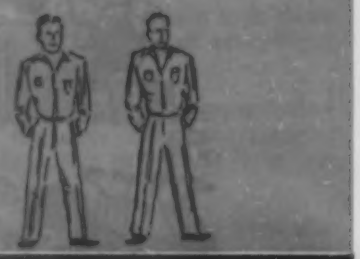

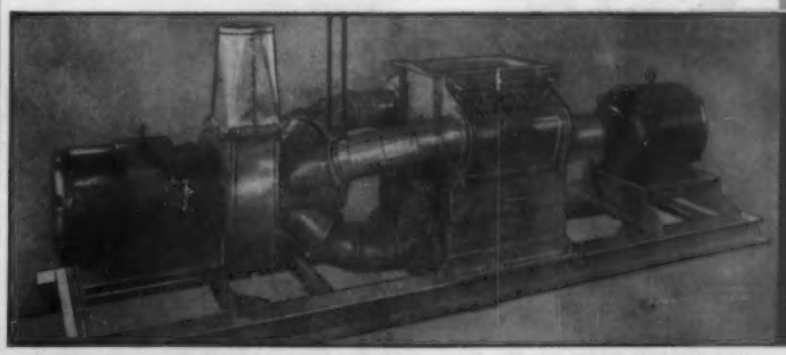

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head increased as protein level increased and decreased as feed intake was decreased. However, more liberal feeding of protein and energy resulted in greater gains at less cost per cwt. of gain than the restricted feeding. It was more economical to restrict gain by reducing the feed intake than by feeding a lower level of protein, he added.

Effects of Hormone

A trial to determine the effects of a hormone on the growth and finish of turkeys was described to the group attending the north central substation field day at Eureka.

Dr. C. W. Carlson, of the South Dakota State College agricultural experiment station, poultryman, said a commercial hormone similar to stilbestrol had been added to the feed of one group of turkeys. Another group served as a control. He said that last year the results had been negative, probably because the control birds had been on a range planted to rape, which has estrogenic values.

The birds this year were taken from the main station to Eureka in June and will be sold during the Thanksgiving period.

Florida Farmer Sells Sart as Livestock Feed

FEDERAL POINT, FLA.—Sart, a hybrid variety of sorghum, has been harvested by Bruce Gray, Putnam county farmer. This is the first time the cover crop has been sold here as feed for livestosk. It was previously grown between seasons and later plowed under.

Mr. Gray planted about 300 acres and sold more than half of his production to a dairyman near Palatka, Fla. Sart often grows to a height of more than 12 ft.

More than 1,000 acres of sart were grown in the area at the end of the potato season and before cabbage plants were set. Hubert Maltby, Putnam county agent, said farmers have made yields of between 15 and 25 tons of sart per acre.

Scientists at the Hastings Agricultural Experiment Station have figured the sorghum silage can provide nutrients at a cost of $3.10 per 100 lb.

With completion of harvest, Mr. Gray is allowing stubble left in his fields to grow more shoots for blending with native grasses to provide a cover crop.

New Egg Program

CABOT, ARK.—Located in a dairy area, The Wood Feed Store here has program in operation. Fred Wood, manager and Purina dealer, has 10 poultrymen with 30,000 laying hens in production in his program.

Mr. Wood says his organization is marketing graded eggs independently, without having a contract with any large egg firm for the entire production. Eggs are being produced for several grocery stores from Cabot to the heart of Little Rock, 30 miles away. The Adkins-Phelps Co., North Little Rock, is the leading purchaser.

D. F. Green

K. B. Kerr

NUTRITION CONFERENCE—Among the speakers who will talk at the 1959 Texas Nutrition Conference Oct. 7-9 will be Dr. D. F. Green, executive director of animal science research, Merck, Sharp & Dohme Research Laboratories, Rahway, N.J., and Kathel B. Kerr, research division, Dr. Salsbury's Laboratories, Charles City, Iowa. The conference will be held at the Memorial Student Center on the Texas A&M College campus, College Station, Texas.

North Dakota Swine, Sheep Days Planned

FARGO, N.D.—The second annual North Dakota Swine Day will be Oct. 21, and the first annual North Dakota Sheep Day will be Nov. 16, according to M. L. Buchanan, chief of the animal industry division, North Dakota Agricultural College. Both events will be held on the college campus.

Though details of the individual programs are yet to be announced, in each case several hours will be devoted to a tour of the newly completed animal research center.

Ranger Firm Donates Swine Maternity Ward

CARBONDALE, ILL.—A $12,500 air conditioned, double-deck, 12-animal maternity ward for sows has been given to Southern Illinois University for teaching and research purposes by the Ranger Equipment Co., a Delphi, Ind., swine equipment manufacturing firm.

Dr. Joseph E. Burnside, SIU swine specialist, says the self-contained steel unit is housed in a prefabricated, insulated building, 46x27 ft., with concrete floor and plywood walls. The wall sections are set on a foundation of concrete blocks 2 ft. high. The building includes a service room in addition to the farrowing center.

For year-round swine comfort the building is heated in winter and provides automatic summer cooling with air conditioning in the farrowing unit. Automatically-controlled feeding, watering and manure disposal are built into the farrowing unit.

Twelve farrowing crates are arranged in two decks, three up and three down on each side of a central service alley containing water and feed auger lines, and the refrigerated air ducts. Each sow stall is served by individual feed cups, water fountains, and cooled air outlets.

Why That Dirty Rat!

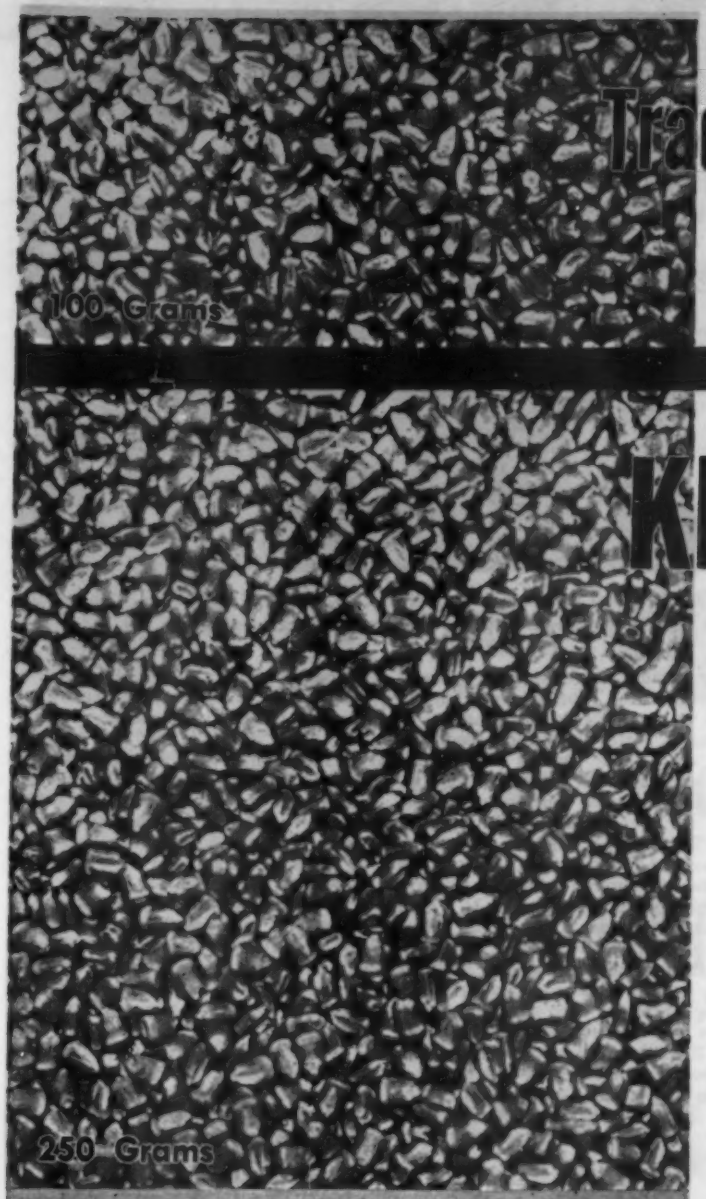
He'll steal about $20.00 a year from your profits through grain and building damage. Rid your elevator of these robbers!!!

DOUGLAS RAT-KILL with WARFARIN dry bait
DOUGLAS RAT and MOUSE KILLER with PIVALYN water soluble bait
Feed both in DOUGLAS' combination dry and water soluble BAIT STATIONS. Rid your buildings of rats and mice now with these rodent-killing Douglas products.

Grain Sanitation Division

Douglas Chemical Company

620 East 16th Avenue — North Kansas City, Missouri



Trade small samples like this

for this more accurate

KING-SIZE SAMPLE

trade up to reliable moisture testing . . . trade for the

Steinlite 500-RC

For years the standard of the grain trade, Steinlite moisture testers are more widely used than all other makes of testers combined. It didn't just happen that way . . . years of research and improvement have been invested in every Steinlite model.

And now the new 500-RC with the new king-size sample tops them all! Here's how the Steinlite 500-RC gives you more of everything you need for better moisture testing:

NEW KING-SIZE SAMPLE—Now you get a better, more representative test of the entire load with the big new 250-gram sample. Nothing to grind . . . retest the sample easily or return it to the load totally undamaged.

INSTANT ACCURACY—Make perfect tests of grain right from the drier or samples of mixed moisture content in seconds . . . no need to wait hours for moisture equalization.

FAST, EASY OPERATION—No chance for human error, you just drop the sample in the test cell, and check the automatic meter reading . . . no buttons to push, no dials to adjust. One scale for all moisture ranges.

IMPROVED FEATURES—New, large 9-inch meter . . . easy-to-read, built-in, eye-level thermometer . . . new round funnel with automatic reset . . . redesigned circuit with overlap elimination.

GUARANTEED PERFORMANCE—Your new Steinlite 500-RC is furnished with a full year's factory guarantee and free loaner service is provided for the life of the Steinlite. You're assured of having topnotch moisture testing facilities at all times.

Protect your grain profits with the most accurate moisture testing possible. See your Seedburo representative or write us for complete information on the Steinlite 500-RC and the generous trade-in allowances being offered for your present equipment.

Seedburo

(SEED TRADE REPORTING BUREAU)

EQUIPMENT COMPANY Dept. FS-9, 618 W. Jackson Blvd., Chicago 6, Ill.

Pelleting for Peak Production and Maximum Die Life

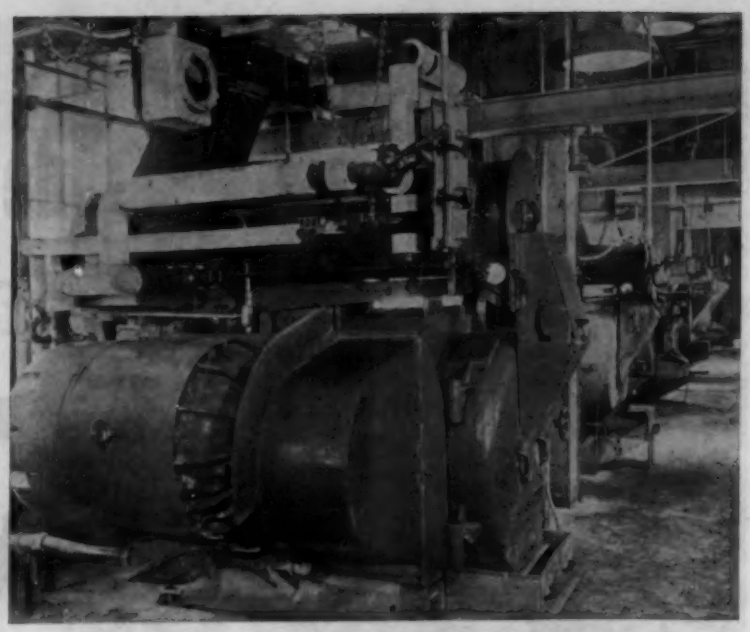
By H. K. Worthington
Allied Mills, Inc.

It is an interesting experience to be so situated in the design of your plant that there are no bottlenecks in the flow of feed to your pellet mill, no limit to the steam capacity, an even pressure and, more important, an even temperature of steam ahead of your pelleting operation. Also, that there are no bottlenecks beyond your machine, positively nothing to prevent a pellet mill from doing its level best.

Then with 125 h.p. at the mill, 5 to 10 h.p. on the conditioner and a fully modulating feed arrangement, what steps can you take to assure the absolute best of which the mill is capable?

Given these ideal conditions, it is safe to say that few if any mills have ever been up to full capacity, absolute peak capacity. And yet that is the place where they do their best work—and if they reach peak, they are practically never kept there.

Let it be said first that in most cases the basic requirement of constant even steam temperatures and pressure are seldom met, and the slightest change in steam conditions will plug a mill operating at peak. Completely uniform feed blending of finely ground ingredients is equally important. And years of work can be spent in getting feed mills set up to produce a perfectly uniform feed. But even with these factors under control, a pellet mill easily capable of 400 cwt. per hour will frequently be seen to operate at something less than 200 cwt. per hour.



This is the pellet mill line in the Peoria, Ill., plant of Allied Mills, Inc., with a 125 h.p. Sprout-Waldron pellet mill in the foreground.

Top efficiency in pelleting is the aim in this and other feed plants. The plant in this aerial view is the Peoria, Ill., mill of Allied Mills, Inc.

Feeds in general might be classified by the predominate factors controlling binding characteristics. If a feed is primarily corn or millfeed base, starch becomes the master. If alfalfa, probably lignins or sugar. If high fiber, usually molasses takes control. If high protein, then proteins themselves are thermo-setting in character. Each of these four groups requires its own favored treatment.

We like to deal with starches, for here steam is all important and a high corn formula literally drinks steam.

More Moisture and Heat

It is a fact that the more moisture and heat that can be introduced into the feed, the greater will be the starch conversion and consequent binding by starch paste, and at the same time the greater will be the lubricating quality of the feed, the lower the power requirement and the higher the pelleting capacity. Also, the less friction loss and less die wear. Since a thicker die has greater resistance, a thinner die will generally permit higher temperatures, greater moisture addition and strangely enough a harder pellet. Under these conditions it is necessary for dies and rolls to be absolutely level and to have an absolute minimum clearance —zero, in fact. For any clearance at all permits the high moisture mash to spaghetti and spaghettiing is the end-point or plug-up.

Here a high speed die gets its best results, for it lays a thin film of feed on the die which tends more to spaghetti as the film becomes thicker, as is the case with a slow speed die. Thus with a high speed die it is possible to get higher temperature and higher moisture before the end point spaghetti effect or plug-up. Obviously, a simple roll does not spaghetti as readily as the conventional corrugation.

We like to see the absolute most number of holes in a die with each hole doing its share of the work. A die whose holes do not wear evenly means a short life, for the end point of the die is governed by the fastest wearing hole.

The action of an ammeter is a fair indication of the condition of a mill. If an ammeter holds steady, it generally means pretty fair operation. But have you ever seen a steady ammeter? And if it is not steady, what are you going to do about it?

It can mean that some holes are plugged, and a plugged hole generally indicates metal in the die. No one can set a roll to zero clearance when there is metal in the die or plugged holes, for the roll will run against the metal plug. So clean dies, knock out plugged holes at periods at least no greater than every three days, for in three days' time you must reset your rolls in order to gain back the 50 bags per hour you have lost by increased roll clearance.

By knocking or punching out dead holes, you will also put these back into operation, particularly the outside rows that never before have gone to work for you. By opening up these holes you will also increase your die life.

At about 2,500 tons it is good policy to take a light cut off the face of the die and rolls, just enough to true them up. By maintaining zero clearance through dressing your dies and rolls,

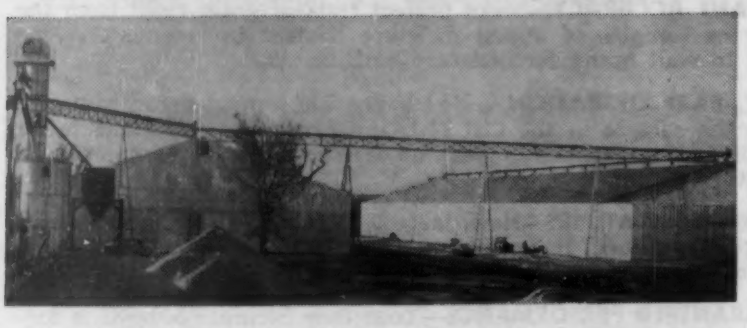
H. K. Worthington

AUTHOR—H. K. (Kim) Worthington, the author of the accompanying article, is director of engineering for Allied Mills, Inc., manufacturer of Wayne Feeds, with his headquarters at Peoria, Ill. Mr. Worthington is an architectural engineering graduate of Pennsylvania State College. After graduation in 1932 he was in government and construction company engineering work. From 1934 until going into military service in 1942, Mr. Worthington was a draftsman and field engineer with Sprout, Waldron & Co., designing and supervising feed and other equipment installations. He joined Allied Mills in 1945 as assistant to the director of engineering and was active in the company's expansion and reconstruction of manufacturing facilities from 1945 to 1956. He assumed direction of the engineering department in 1956.

Highly Efficient...More Economical Grain Handling

With Standard BAZOOKA Grain Auger

ELEVATOR and CONVEYOR SYSTEMS

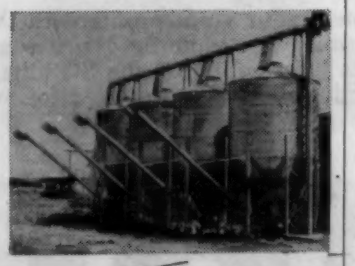


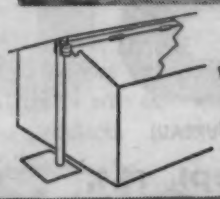
638 Feet of Standard Bazookas Move the Grain in this 1,400,000 Bushel Storage Facility

Pictured above is a typical example of how Wyatt uses standard Bazooka grain augers to provide efficient, more economical grain elevator and conveyor systems.

Four, 6, 8 and 10 inch augers are used vertically, horizontally or at any angle to handle grain, bulk feed or other non-bridging materials indoors or out.

In addition to efficiency and economy these Wyatt systems require minimum space, are low in upkeep and are self cleaning. Wyatt engineering services are available for plant layout and design. Write for details.





Other ways Wyatt systems are used to handle feed, grain or other similar materials.

by WYATT M F G. CO., INC. • SALINA, KANSAS

DISPLAY—Farm stores will feature this new self-service Chas. Pfizer & Co., Inc., "Egg Robber" display carrying pick-up packs of Terramycin Egg Formula, the company has announced. The Pfizer product is being offered this fall in new packages of 1 lb. and ¼ lb. units. In the 1 lb. pack, Terramycin Egg Formula treats up to 1,280 gal. of water, enough for 100 birds for eight months, say Pfizer spokesmen.

you will probably exceed 5,000 tons die life on wide faced dies. Most people let them go too far before dressing. Keep them straight!

Another cause of a swinging ammeter is uneven moisture addition. Try setting back the paddle in your conditioner until you run a full mixer load of feed. You will get better steam absorption and a quieter ammeter.

Does your mill have a smooth purr or a periodic change of sound? A smooth purr and steady ammeter are good. A periodic growl and a swinging ammeter can evidence loose main bearings, an off-center die and the fact that the die is producing probably on about two-thirds of its surface due to uneven contact of the rolls. This may mean a major overhaul and a new set of bearings. But until that ammeter is steady, you will not get production — that is, peak production.

You can have absolute confidence that when everything is right, any ring type mill will produce. You will truthfully get a tremendous thrill out of taking the worst clunker and training that ammeter to stand still.

Boyd Curtis Promoted By Wirthmore Feeds

WALTHAM, MASS.—Boyd M. Curtis, Honeoye Falls, N.Y., has been promoted from poultry service representative for Wirthmore Feeds, Inc., to district sales manager in the same New York-Pennsylvania area, according to a recent announcement by R. D. Emmons, general sales manager.

Mr. Curtis is a graduate of the University of Maine, and also studied courses at Pennsylvania State, the University of Rochester, Rochester, N.Y., and Cornell University. He joined the Wirthmore firm in 1958.

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR FOOTED ANIMALS

Arkansas Grain Corp. Plans Construction

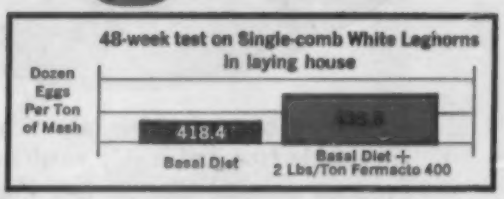
STUTTGART, ARK.—The Arkansas Grain Corp., organized here last year to promote the soybean production program, is carrying out a soybean storage elevator construction program.

Elevators already completed or under construction are located at Corning, Des Arc, Dumas, Fair Oaks, Hazen, Hickory Ridge, Lonoke, Jonesboro, McGhee, Stuttgart, Weiner and Wheatley. The elevators will have an 8-million-ton storage capacity.

The next project being planned for the soybean program is a $1½ million soybean oil extraction plant. Total sales, with soybean oil and meal, are expected to reach $20 million each year.

The new unit will process 500-700 tons of soybeans daily. Thirty-five workers will be employed for its operation.

Two bits can get your customers 17 extra dozen... that's all it costs to fortify 1 ton of mash with fermacto 400 the unique blend of multiple fermentation factors for complete ugf fortification. Here's proof...


48-week test on Single-comb White Leghorns in laying house
Dozen Eggs Per Ton of Mash
418.4
Basal Diet
Basal Diet +
2 Lbs/Ton Fermacto 400

And for economical production without *over-fortification* try Borden's 300 the balanced laying mash supplement containing fermacto 400 and all essential micronutrients at about $1.25 per ton on an all-mash basis. For *custom* blended micronutrients, too, contact your Borden's field man.

For complete price schedules and information contact

THE Borden COMPANY
FEED SUPPLEMENTS DEPARTMENT
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Laboratories and Test Farms at Elgin, Illinois

YOU CAN ADVERTISE YOUR FEEDS LIKE THIS...

START TODAY TO INCREASE YOUR
MILK PROFITS!
YOUR BRAND FEED
WITH NU-CUD®

Contains Enzyme-producing Live Rumen Bacteria, to promote higher milk production through better use of feed and better nutrition.

Make sure your feed contains Dr. LeGear's NU-CUD the Enzyme-Bacteria Additive.

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FOR MORE INFORMATION WRITE:
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For well-balanced nutritive feeds

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PRODULAC
CORN DISTILLERS SOLUBLES WITH GRAINS

BOTH GRAIN FERMENTATION PRODUCTS

NADRISOL
CORN DISTILLERS DRIED SOLUBLES

These economy fortifiers are rich in proteins, vegetable fats, and highly nutritious. They also contain essential Vitamin B-G Complex factors, as well as unidentified growth factors. Mixing Nadrisol or Produlac in your formula feeds will promote quicker growth, greater meat and egg yield and will produce feeds your customers want to buy. It's a good way to gain and hold customer acceptance.

Sold only to manufacturers of formula feeds.

NATIONAL DISTILLERS PRODUCTS COMPANY
GRAIN PRODUCTS SALES
99 PARK AVENUE, NEW YORK 16, NEW YORK

Hog Prices May Hold Up Better Than Usual This Fall—Economist

URBANA, ILL.—Hog prices may not sag so much as usual this fall, according to Prof. L. H. Simerl, ag economist at the University of Illinois. Several facts, he said, support this possibility:

1. Prices have already been at a low level this summer.

2. Recent weekly market supplies have been 15 to 25% larger than year-before runs, but later in the fall receipts may be only a little larger than 12 months ago.

3. Broiler supplies will be smaller this fall than a year ago, rather than larger, as has usually been the case.

5. Some consumers may spend a little more freely for pork when the steel strike is over.

At any rate, looking farther ahead, hog prices in September and October will influence the number of sows bred for spring pigs, and consequently the hog price next fall. Prices of $13 or above seem likely to encourage increased production, while prices under $12 would surely bring some cutback.

The winter hog market, said Prof. Simerl, "may be as rough as a cob." Unusually large supplies depressed prices last winter, and farmers reported plans to increase the 1959 fall pig crop (to be marketed in the first half of 1960) by 9%. This would bring the total increase over two years to 27%.

Chase Bag to Occupy New Office Building

NEW YORK—Chase Bag Co. will move its executive offices on Oct. 1 to the recently completed 22-story office building at 355 Lexington Ave. in New York, according to F. H. Ludington, president. The firm maintains 14 plants and 32 sales offices throughout the country.

The Chase Bag Co. executive offices have been in the Commerce Building at 155 E. 44th St., New York, more than 25 years. After Oct. 1 its entire headquarters staff will be at the new location, including sales personnel serving the New York territory, general sales office, purchasing, accounting, advertising and administrative departments.

M. W. Thatcher, Jr., Grain Dealer, Dies

MINNEAPOLIS—M. W. Thatcher, Jr., 50, died Sept. 5 at his home in Golden Valley, Minneapolis suburb. He was the son of M. W. Thatcher, Sr., general manager of the Farmers Union Grain Terminal Assn. The younger Thatcher, a native of Chicago, was a grain merchandiser for the Bunge Corp. for many years and was a member of the grain exchange.

Survivors, in addition to his father, include his wife, Bernice, and three daughters, Mrs. Paul Radde, St. Louis Park; Mrs. William Sime, Edina, and Mrs. William Samson, Springfield, Va.

Named to Sterwin Animal Health Unit

NEW YORK — Appointment of Wayne Howser as assistant products manager of its animal health division has been announced by Robert S. Whiteside, president of Sterwin Chemicals, Inc.

Wayne Howser

Mr. Howser will assist in handling sales of Sterwin's entire line of animal health products, including the coccidiostat Trithiadol, and Cocci-Vac, for coccidiosis control by vaccination. He will make his headquarters at the company's New York City office.

Mr. Howser was previously assistant to the sales manager of the d-Con Co., Inc., manufacturer of rodenticides. From 1951 to 1957 he was associated with the Quaker Oats Co.

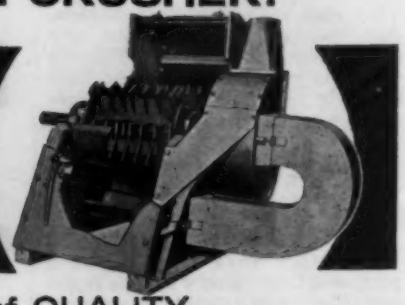
He will report to L. R. Patton, who is in charge of sales of Sterwin's animal health division.

FEED ELEVATOR

ALLEGAN, MICH. — Harvey G. Breuker, Allegan, has filed a certificate in the county clerk's office to operate a business under the name of Bruce-Alan Feed Elevator here.

SAVE the PRICE of an EAR CORN CRUSHER!

W-W HAMMERMILLS GRIND WITHOUT PRE-CRUSHING



the Standard of QUALITY for Over 50 Years

Why buy two machines when one will do the job? W-W Hammermills, with exclusive Star Cylinder, grind ear corn without pre-crushing and they handle all grinding assignments more efficiently, with less power than any other mill.

They have heat-treated hammers, hard-surfaced with Tungston Carbide to always maintain a cutting edge. Quality construction — with cast iron frame assures you of a long, trouble-free service.

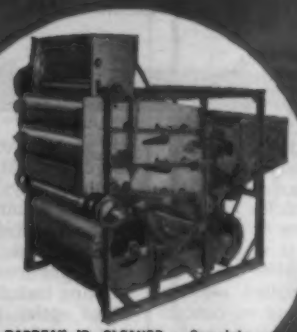
You get more for your money — all the way through. Here are representative prices:*

MODEL	HORSEPOWER	FEED OPENING	PRICE*
F-25M Gooseneck	40	18"	$ 697.04
F-27M Gooseneck	75	24"	$1665.86
F-29M Gooseneck	100-150	36"	$2183.98

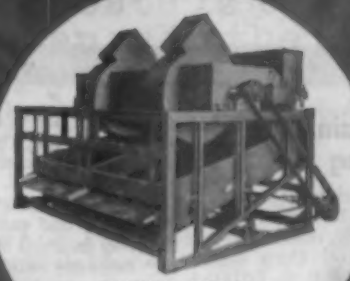
Other Models from $154.00 to $408.16. All prices f. o. b. factory.
A convenient time-payment plan is available. Write for complete information.

W-W GRINDER CORP. Dept. 311 2957 NORTH MARKET WICHITA 4, KANSAS

TWIN SHOE CLEANER • Over 40 sizes from which to select in Twin Shoe or in 3 and 4 screen, 2 air Standard and Special Models. Capacities to suit every requirement.

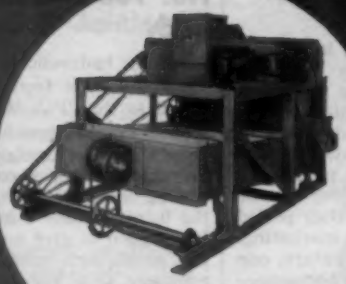


BARBEAU JR. CLEANER • Complete compact system. Ideal for small operators.



RECEIVING SCALPER • 11 sizes, 1 and 2 screen models. Wide range of capacities.

CLEANERS



SNAPPY AIR FINISHER • 7 sizes — Capacities to 20 tons/hr.

SNAPPY SHAKER • 7 sizes in choice of 1 or 2 deck models.

- Variety of Models
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- Efficient, Proved Designs
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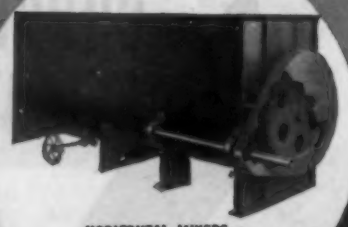
- Competitive Prices

you can't afford less than the best . . .



HORIZONTAL MIXERS • MIXALL and SANIMIX — 27 models, standard, heavy-duty and sanitary plus custom-built.

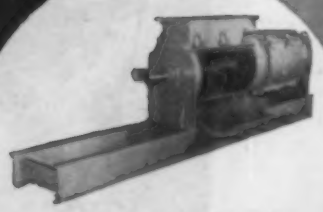
VERTICAL MIXERS • Capacities from ½ to 4 tons and more per batch.

MIXERS

- Matched to Your Needs
- High Capacities
- Low Operating Costs
- Standard & Custom Models
- Choice of Models

S. HOWES CO., INC.
SILVER CREEK, N. Y.

DUPLEX MIXERS • Choice of sizes, to meet your capacity requirements.



DYNAMIC MIXERS • High speed agitation assures thorough mixing of liquids-feed. Two sizes. As much as 50 tons/hr.

EUREKA equipment does so much so long...for so little

It will pay you to get the facts whether you're considering a new installation or a replacement. Incidentally, you'll find other units in the EUREKA line well worth investigating, too.

THE RIGHT PLACE TO LOOK FOR A BETTER BUY...Write or Phone for Prompt Personal Service

WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7647—Grain Storage Building

Both grain and machinery can be stored in the "Grain-Master 44," a multi-purpose building recently introduced by Stran-Steel Corp. The building will store 15,000 to 50,000 bu. or more. It is 44 ft. wide, 16 ft. high at the peak with lengths in 16 ft. bays. The unit has double walls of steel, a steep pitch roof and convenient loading hatches at the

roof peak for full loading without interior handling, the company said. Other features include an all-steel three piece door bulkhead and the company's Air Meter to cool the grain. Movable partitions can divide the interior into grain storage and machinery storage. Sixteen foot doors allow the widest combines to enter. A choice of six exterior colors is available. For more information check No. 7647 on the coupon and mail.

No. 7662—Fly Maggot Control

A larvacide designed to provide control of fly maggots under poultry cages is being introduced by Allied Chemical. Called "Kilmag," the product is reported by the company to give almost 100% control in tests on house fly larvae. The product is a calcium arsenate compound formulated of unusually small particles and suspending agents that give it penetrating ability and enable it to work effectively in small quantities of water, the company said. Applied once a week, the product is said to control the maggot stage of houseflies in accumulations of droppings under wire cage floors. In use, 2 lb. are mixed with 4 gal. water. This is enough for treatment of 1,000 sq. ft. of manure. For more information, check No. 7662 on the coupon and mail.

No. 7656—Sales Letter Booklet

"Read's Rural Rhetoric—Coagulated," a booklet of excerpts from "the off-beat sales letters used by the Gladwin A. Read Co. in hawking specialties for livestock feeds," is ready for distribution. The booklet contains anecdotes and sayings concerning a great many subjects. For copies of the booklet, check No. 7656 on the coupon and mail.

No. 7658—New Control Unit

Hot Spot Detector, Inc., announces the development of a new control unit for its Automatic Remote line of electronic temperature measuring systems. The unit is a foot control for the manual operation of the instrument. Presently, manual operation is accomplished by depressing the master control lever to manual position and then depressing the individual thermocouple lever to select the thermocouple desired. With the new unit, the company says, the operator can control the manual operation by the use of the foot switch, leaving both hands free for the recording of temperatures. The unit can be installed in any existing installation and will be offered as optional equipment on all new systems. For details, check No. 7658 on the coupon and mail.

No. 7660—Lamb Hormones

A hormone implant for lambs has been announced by Chas. Pfizer & Co., Inc. The small-dosage stilbestrol pellet is specially formulated for increasing weight gains and feed efficiency, the company says. Trademarked "Stimplants for Lambs," the product is implanted in the ear or jaw at the start of the feeding period or about 70 days prior to marketing. According to company literature, one pellet contains enough hormone—three milligrams of diethylstilbestrol—to provide maximum growth benefits up to market time. In company trials, lambs showed an average increase of 20% in rate of gain and a 19% improvement in feed conversion. The implants are recommended for both ewe and wether lambs, in feedlot or on pasture and at the same level of implanting—one 3 mg. pellet per finishing period. The implants are for use where 40 to 90 lb. lambs are receiving normal rations. The product is being marketed in "cartridge pack" clips of 25 pellets for use in Pfizer implant guns. For more information, check No. 7660 on the coupon and mail.

No. 7661—Bulk Feed Body

A fully hydraulic hopper-type self-unloading bulk feed body has been added to the "Pak-Master" range of models manufactured by the Gaddis Bros. Manufacturing Co., Inc. The unit features power controls for positioning the final discharge auger and the 9 in.—12 in.—9 in. auger system is designed to give maximum unloading speed with minimum fines, the company said. The unit is manufactured in a complete range of sizes from 10 ft. to 20 ft. in length for every type operation and tonnage requirement. It is available in either

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- ☐ No. 7647—Grain Storage Building
- ☐ No. 7656—Sales Letter Booklet
- ☐ No. 7657—Belting Joining Booklet
- ☐ No. 7658—New Control Unit
- ☐ No. 7659—Bulk Feed Handler
- ☐ No. 7660—Lamb Hormones
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auger or air-unloading. The unit, called the Pm30 Super Deluxe, features a full 9 in. floor auger with variable speed control. The device is also manufactured in trailer units with capacities ranging up to 20 tons. For complete details, check No. 7661 on the coupon and mail.

No. 7657—Belt Joining Booklet

Imperial Belting Co. announces the availability of a brochure showing the application of belt joining equipment manufactured by the firm. Step-by-step photographic instructions for use of the firm's "Jackson Fasteners" are included. Also contained is a

chart of the material that is needed for bolts of every size. According to the literature, the fasteners ride on the bucket side of the belt only and are curved to round the pulleys with ease. A copy of the brochure, which also contains information on Imperial's interlocked stitched canvas belting, can be secured by checking No. 7657 on the coupon and mailing.

No. 7659—Bulk Feed Handler

Production of a new model "Mix-O-Vator" bulk feed handler has been

announced by Dodgen Industries. The unit is designed to manufacture formulated feeds right on the farm. The model is a complete self-contained operation with a built-in scale that measures to the ounce, the company says. A complete mounted power unit that operates the Letz mill and mixing system and a hydraulic controlled discharge spout that puts the feed high or low are other features. For more information about the unit, check No. 7659 on the coupon and mail to this publication.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 7610 — Half-round aeration, Rolfes Grain Aeration Companies.

No. 7611—Materials handling unit, Conveyors & Dumpers, Inc.

No. 7612—New size package, Abbott Laboratories.

No. 7613—Checkweigher literature,

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Strong Scott

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484 bushels of corn were unloaded in 15 minutes with the Strong-Scott Elevator Leg pictured here.

Pink Van Gorden, left, has no problem in keeping his customers satisfied as shown above. Pink and his brother Dick are carrying on the business started by their father.

says "Pink" Van Gorden, co-owner of H. H. Van Gorden & Sons, Neillsville, Wisconsin

This 2-ton Triple Action Mixer, after 20 years' use, is still going strong. It extends over the driveway for bulk discharge as well as inside sack-off discharge.

The recently installed Hammermill is part of a rebuilding job being done by contractor Arnold Schroeder.

Reliability of Strong Scott Equipment is well proven by the 25 years, trouble-free use of this Molasses Mixer.

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"Our Triple Action Mixer has been in use for over 20 years and we haven't changed even a drive belt," added Pink. The Strong-Scott Molasses Mixer has been in operation for over 25 years.

"Now, our new Strong-Scott Hammermill has been installed and we are very pleased," Pink stated. "It really does a good job and our customers are well satisfied."

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No. 7615—Auto leasing study, Foundation for Management Research.

No. 7616—Push button hog feeder, Parker Feeders, Inc.

No. 7617—Large grain bin, Martin Steel Corp.

No. 7618—New catalog, Burrows Equipment Co.

No. 7619—Bulletin on stream splitters, Sprout, Waldron & Co., Inc.

No. 7620—Hard-grains roller mill, Ross Machine & Mill Supply Inc.

No. 7621—Fresh egg merchandiser, Tobias Enterprises.

No. 7622 — Power drum handler, Specialty Machinery Corp.

No. 7623 — Dual motor vibrator, Cleveland Vibrator Co.

No. 7624 — Conversion truck unit, Ripco Air Systems.

No. 7625—Equipment catalog, the Bauer Bros. Co.

No. 7626—Crusher bulletin, Metals Disintegrating Co., Inc.

No. 7627 — Drag plate conveyor, Strong-Scott Manufacturing Co.

No. 7628 — Dairyman's Promotion, Hess & Clark.

No. 7629—Moisture barrier, Knott Chemical Co.

No. 7631 — Handle bag, Hudson Pulp & Paper Corp.

No. 7632—Automatic batching control, Toledo Scale Corp.

No. 7633—Vibration inducer, Martin Engineering Co.

No. 7634—Pig raising information, Chore Boy Manufacturing Co., Inc.

No. 7635—Mastitis ointment, Merck & Co., Inc.

No. 7646—Impact mill, Safety Industries, Entoleter Division.

No. 7647—Grain storage building, Stran-Steel Corp.

No. 7648—Grain cleaner, Superior Co.

No. 7649—"New Leader" spreader, Highway Equipment Co.

No. 7650—New package size, Hess & Clark.

No. 7651—Boiler bulletin, Superior Boiler Works.

No. 7652—Feed grinder bulletin, Gruendler Crusher & Pulverizer Co.

No. 7653—Cattle cobalt bullet, Nichols of America Ltd.

No. 7654—Feed body options, Gaddis Brothers Manufacturing Co., Inc.

No. 7655—Hydraulic mobile mill, Iowa Portable Mill.

GRAIN FIRM INCORPORATED

CRAIG, COLO.—Gilbert Meats Grain Co. has been incorporated, listing $50,000 capitalization, to acquire and operate a grain elevator or grain elevators. Incorporators and directors are Gilbert and Gladys Meats and Barbara Bausch.

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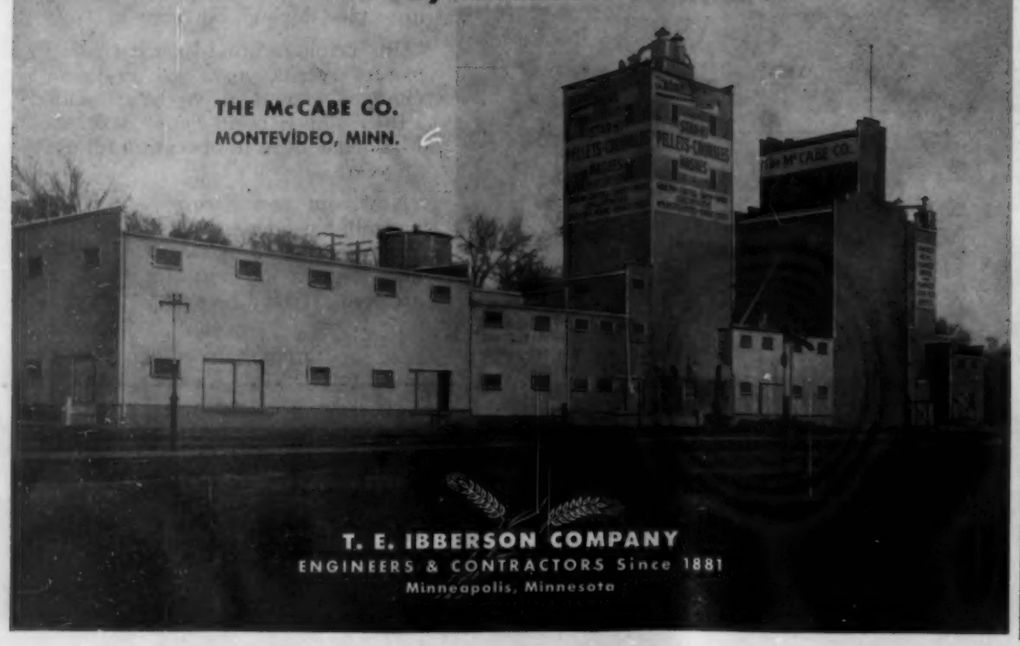

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17 Million Tons of Commercial Feedstuffs Consumed First 10 Months of This Season

WASHINGTON — The 17 million tons of commercial feedstuffs consumed the first 10 months of this season was 1.2 million tons greater than for the same months a year earlier, the U.S. Department of Agriculture reports.

Most of the increase in feeding over last year, USDA says, reflects the larger number of animal units which is estimated at 170 million for 1958-59 compared with 161.5 million in 1957-58. These numbers indicate a record of 200 lb. of feed were fed per animal unit from Oct. 1, 1958 through July 31, 1959 compared with 196 lb. last season and the five-year average of 180 lb.

Domestic disappearance of oilseed meals during October-July of this season was 10,166,300 tons, about 10% greater than for the same period a year earlier. Most of the increase was in soybean meal, with consumption at 7,638,700 tons so far this season, 950,000 tons above last year. Exports of oilseed meals, mainly soybean meal, totaled 488,000 tons October through July, as against 274,000 during the same months of 1957-58.

Consumption of wheat millfeeds increased during July, but the total thus far this season was down slightly from a year earlier. Feeding of other grain by-product feeds was at about last year's level.

Shipments of alfalfa meal during July were well above last year and the yearly total also was higher.

Alfalfa meal disappearance, October-July, 1958-59, amounted to 1,083,100 tons, compared with 1,028,200 for the same period a year earlier. Stocks of alfalfa meal at producing plants at the end of July were nearly 10% above a year earlier.

USDA said feedstuff prices averaged $52.15 ton Sept. 1, lower than the $54.50 average a month earlier and $57 a year earlier.

Feedstuffs: Production, stocks, foreign trade and domestic disappearance October-July, 1958-59 and 1957-58

Feedstuff	Stocks Oct. 1*	Production	Imports†	Exports†	Domestic disappearance	Stocks July 31*
	(1,000 short tons)					
	October, 1958-July, 1959					
OILSEED MEALS:						
Soybean	48.1	8,148.6	0	486.3	7,638.7	121.7
Cottonseed	71.2	1,904.6	136.7	5.2	1,991.0	116.3
Linseed	26.3	344.5	3.3	17.3	344.5	12.3
Copra	0.6	92.5	33.9	**	127.0	....
Peanut	1.5	65.8	0	**	65.1	2.2
Total	147.7	10,556.0	173.9	458.8	10,166.3	252.5
GRAIN BY-PRODUCTS:						
Wheat millfeeds	**	3,840.3	70.6	28.9	3,882.0	**
Rice millfeeds	**	193.2	**	**	193.2	**
Gluten feed and meal	**	860.1	**	**	860.1	**
Distillers dried grains	2.2	299.9	**	**	292.7	9.4
Brewers dried grains	4.9	192.0	**	**	191.5	5.4
Total	7.1	5,385.5	70.6	28.9	5,419.5	14.8
OTHER FEEDS:						
Fish meal	**	237.6	117.8	**	355.4	**
Alfalfa meal	439.7	947.2	**	**	1,083.1	303.8
Total feeds	594.5	17,126.3	362.3	487.7	17,024.3	571.1
	October, 1957-July, 1958					
OILSEED MEALS:						
Soybean	54.7	6,952.5	1.4	259.1	6,680.2	61.3
Cottonseed	209.7	1,717.7	47.4	6.8	1,855.5	112.5
Linseed	63.7	353.7	6.0	5.9	402.2	15.3
Copra	0.7	99.2	58.5	**	158.0	0.4
Peanut	3.2	40.1	0	1.8	39.8	1.7
Total	332.0	9,163.2	113.3	273.6	9,143.7	191.2
GRAIN BY-PRODUCTS:						
Wheat millfeeds	**	3,892.1	83.7	61.7	3,914.1	**
Rice millfeeds	**	193.2	**	**	193.2	**
Gluten feed and meal	**	857.2	**	**	857.2	**
Distillers dried grains	2.4	243.6	**	**	245.1	0.9
Brewers dried grains	4.0	187.2	**	**	186.8	4.4
Total	6.4	5,373.3	83.7	61.7	5,396.4	5.3
OTHER FEEDS:						
Fish meal	**	190.6	78.2	**	268.8	**
Alfalfa meal	441.5	863.9	**	**	1,028.2	277.2
Total feeds	779.9	15,591.0	275.2	335.3	15,837.1	473.7

*Stocks at processing plants only. †Partly estimated. **Not available.

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NEW OFFICE BUILDING—This new office building at Central Soya's Decatur, Ind., plant was the site of a recent open house celebrating the company's 25th anniversary. In addition to providing working space for the plant's office staff, the new building serves as central headquarters for Central Soya's engineering and technical departments.

Central Soya Opens New Office Building At Indiana Plant

DECATUR, IND.—A new office building for the Decatur plant of Central Soya Co., Inc., Ft. Wayne, Ind., was dedicated here recently by Harold W. McMillen, chairman of the board, during an open house program celebrating the 25th anniversary of the company's founding by his father, Dale W. McMillen.

(A story concerning the anniversary, the opening of a new office building and a modernized soybean lecithin plant at Gibson City, Ill., by Central Soya appeared in the June 13, 1959, issue of Feedstuffs.)

Mr. McMillen presented a silver key to the new building to Tom H. Allwein, one of the company's original employees, and now manager of the Decatur plant.

The new office building was described by Mr. McMillen as "a symbol of our confidence in the company's next 25 years." And he added, "Not only has it provided pleasant and efficient facilities for the plant office staff, but it has provided central headquarters for our engineering and technical departments, which serve all of the company's operations. In addition, the new building has made available the old office space for expanded feed, soya and grain activities."

Dale W. McMillen, Jr., Central Soya president, also reviewed the company's progress in a talk during the anniversary celebration. He said Central Soya is now operating soybean processing plants in six different locations, has seven feed manufacturing locations and operates a grain merchandising business using approximately 43 million bushels of storage.

He noted that Master Mix livestock and poultry feeds manufactured by the company are being distributed in 31 states with a sales force of 182 men. "This compares with a force of only seven men who served the states of Indiana, Ohio and Michigan the company's first year," Mr. McMillen commented.

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The versatile unit pit dumps or can be equipped with 14-foot folding or rigid full-swiveling 18"-wide endless-belt conveyor. Discharge is in excess of a ton per minute. Other outstanding features include:

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Describe Changes In Pillsbury Co.

MINNEAPOLIS, MINN. — Personnel reorganization, greater emphasis on research and plant modernization were cited as examples of major moves made recently within the feed division of The Pillsbury Co. by Dean McNeal, executive vice president, agricultural area, in a report at the company's 90th annual stockholder meeting here.

He said Pillsbury's feed division has kept pace with the fast-changing formula feed industry. "Our feed division of today," he said, "looks and operates very much differently than it did as recent as three years ago."

He noted that ground was broken this spring for the division's newest feed plant in Jasper, Ala., which will be in production next year.

Pillsbury officials announced plans to make its first capital investment outside the North American continent by building a flour mill in Maracaibo, Venezuela. Also, Pillsbury has entered into a technical assistance agreement with a Guatemalan mill to produce Pillsbury brands to specifications of the Minneapolis firm.

Pillsbury's entry into the overseas milling field will be carried on under a partnership agreement with the Mendoza family, leaders in Venezuela's industrial development. The $2 million mill, with a daily capacity of 3,300 cwt. of flour, will serve five or six western states of Venezuela. As part of their contribution, the Venezuelan partners will build a feed mixing plant adjacent to the flour mill. This plant will utilize milling by-products to serve dairy and livestock areas north and west of Maracaibo.

Paul S. Gerot, Pillsbury president, estimated that the company would spend at least $10 million in capital expenditures in the next year. He predicted a general increase in Pillsbury's volume sales for the coming year, but commented that it would be difficult to match the dimensions of record earnings increases produced by the company during the past two years.

The stockholder meeting was directed by Philip W. Pillsbury, board chairman, and included additional reports by R. J. Keith, executive vice president, consumer area, and John P. Snyder, Jr., production vice president.

All officers and directors of the company were reelected with the exception of Harry Hodge, who resigned as controller. His functions will be assumed by Terrance Hanold, principal financial officer.

Firm to Make Seaweed Feed in Nova Scotia

YARMOUTH, NOVA SCOTIA—Manufacture of feeds for livestock and poultry from seaweed is being introduced to Nova Scotia by Bonda Foods, Ltd., an international Dutch firm.

In Europe, one of the best-selling seaweed concentrates for use in cattle feed is Bonda's Provimi, which will be available shortly in Nova Scotia both as a concentrate and as a complete feed, officials said. European farmers usually buy the concentrate and mix it with their own grains.

Four types of seaweed are processed: Kelp, Irish moss, dulse and rockweed. All contain valuable trace minerals and other basic essentials, according to Bonda officials.

IDAHO FIRM INCORPORATED

IDAHO FALLS, IDAHO—Articles of incorporation have been filed for Skelton Enterprises, Inc., listing $100,000 capitalization, to deal in livestock and livestock feed. Incorporators include Leona Reed, Maxine Fairless and Phyllis Erb, all of Idaho Falls.

Reader—"Dear Editor: What's the best way to find out what a woman thinks of you?"

Editor—"Marry her."

◆ ◆ ◆

"Well, Doc, you certainly kept your promise when you said you'd have me walking again in a month."

"Good, I'm glad to hear it."

"Yeah. Had to sell my car when I got your bill."

◆ ◆ ◆

A northern farm hand went to work for a Texas rancher. There had been a long drouth, and every man on the ranch was hoping for a rain. One day it started to sprinkle, and the farm hand, to show his delight, began to dance in the rain.

"Hey, you," shouted the ranch owner, "come in out of the rain!"

"Oh, I don't mind it a bit," called back the farm hand.

"That isn't the point," insisted the rancher. "I want every drop of that water to fall on Texas."

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Bier: "The Weavers are so quiet tonight. Is there anything wrong?"

Gardiner: "No; they're always that way. When he proposed, he just held up a diamond ring and said, 'Eh?' and she looked at it and said, 'Uh-huh'."

◆ ◆ ◆

He was playing middle-aged wolf. Seating himself next to a cute little blonde on the bus, he leaned over and asked, "Where have you been all my life?"

She looked at him coolly and replied, "Well, for most of it, I wasn't born."

◆ ◆ ◆

Radio Russia says that America is a hysterical topsy-turvy country where people eat upside-down cake, doors go around in circles and everybody has an inside outhouse.

◆ ◆ ◆

"My wife had a dream last night and thought she was married to a millionaire."

"You're lucky! My wife thinks that in the daytime."

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I'm the life of the party since I started on feeds with SUCRO-FLAVOR
TRADEMARK
AFTER
FLAVOR CORPORATION OF AMERICA
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"Strategically located mills and Ful-O-Pep broiler research are helping dealers and growers reduce costs in a highly competitive business,"

says **W. B. CARDEN,** *Manager of Southeastern Feed Division of The Quaker Oats Company, In this report to Ful-O-Pep Dealers*

W. B. CARDEN started 17 years ago as a District Representative for The Quaker Oats Company. From 1945 to 1955, he was manager of a poultry processing plant and a Ful-O-Pep District Manager. In 1956, he was promoted to Manager of Ful-O-Pep's Southeastern Feed Division. He is also a director of the Tennessee Feed Manufacturers Association.

"The biggest thing that has happened to the feed business in the Southeast has been the tremendous growth of the broiler industry. Quaker has moved rapidly to help Ful-O-Pep Dealers and growers cash in on this opportunity.

"Continuous research at Decatur, Alabama, has steadily increased the efficiency of Ful-O-Pep Broiler Feeds. This is constantly leading to lower costs necessary for a profitable operation today.

"The quality of broiler meat produced has also been improved by balanced nutrition and careful, sound management. Business-minded broiler men hail Quaker's contribution to the broiler industry.

"In order to provide fresher feeds, bulk feeds and faster service to dealers and broiler growers, Quaker has installed another new mill at Asheville, North Carolina. This is in addition to Southeastern mills at Tampa, Florida . . . Chattanooga, Tennessee . . . Jasper, Alabama and Memphis, Tennessee. Dealers and growers both benefit from Quaker's forward thinking and capital outlay.

"Ful-O-Pep, through trained District Representatives, is also providing sound counselling to dealers on credit, bulk installations and other important management problems.

"Why don't you talk to your local Ful-O-Pep Man? Perhaps he can help you too, to increase the efficiency of your feed operation."

W. B. Carden

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Convention Calendar

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

• • •

Oct. 21—North Dakota Swine Day; North Dakota Agricultural College, Fargo; M. L. Buchanan, Chief, Division of Animal Industry.

Oct. 23—Poultry Study Days; University of Arkansas, Agricultural Experiment Station, Animal Science Bldg., Fayetteville; chm., Prof. R. M. Smith, Animal Industry Department.

Nov. 16—North Dakota Sheep Day; North Dakota Agricultural College, Fargo; M. L. Buchanan, Chief, Division of Animal Industry.

Sept. 21—Illinois Egg Council; Illinois Building, State Fair Grounds, Springfield, Ill.; sec., Scott Hinners, Southern Illinois University, Carbondale.

Sept. 21-22—Seventh and Eighth Areas, National Renderers Assn.; Cosmopolitan Hotel, Denver; sec., R. Fleming, Seventh Regional Area, Box 615, Des Moines, Iowa.

Sept. 23—Minnesota Beef-Grassland Field Day; Rosemount Experiment Station, Rosemount, Minn.; chm., Dr. J. O. Christianson, Department of Agricultural Short Courses, University of Minnesota, St. Paul 1.

Sept. 23—Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington, Vt.; sec., D. C. Henderson, Hills Agricultural Science Building, Burlington, Vt.

Sept. 23-25 — Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 24-26—Pennsylvania Millers & Feed Dealers Assn.; Yorktowne Hotel, York, Pa.; sec., Donald W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 26—Small Mill Short Course; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 29-30 — Pacific Northwest Garden Supply Trade Show; Masonic Temple, Portland, Ore.; mgr., Russ Hays, 702 Lewis Bldg., Portland, Ore.

Oct. 1-2—National Feed Ingredients Assn.; Pick-Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Oct. 6-8 — Northeastern Poultry Producers Council Exposition and Convention; Farm Show Building, Harrisburg, Pa.; chm., Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

Oct. 7-9—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 8—Fall Feeders Day; North Platte Experiment Station, North Platte; Prof. W. J. Loeffel, Animal Husbandry Dept., University of Nebraska, Lincoln.

Oct. 8-9—Alabama Animal Nutrition and Management Conference; Duncan Hall, Alabama Polytechnic Institute, Auburn; sponsored by Alabama Feed Assn., sec., Merlin Bryant, Brundidge Milling Co., Inc., Brundidge, Alabama.

Oct. 9—Montana Cattle Feeders Day; Montana State College, Bozeman; Dr. O. O. Thomas, Department of Animal Industry.

Oct. 11-14—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Cumberland Falls State Park, Corbin; sec., John W. Tuttle, 730 Rose St., Lexington, Ky.

Oct. 14—Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Irwin Olcott, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32, Ill.

Oct. 14-15—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Agricultural Experiment Station Bldg., University of Kentucky, Lexington, Ky.

Oct. 15-16—Michigan Feed & Grain Dealers Assn.; Kellogg Center, Michigan State University, East Lansing, Mich.; sec., Nevels Pearson, P.O. Box 472, East Lansing, Mich.

Oct. 19-20—Beef Research Conference (attendance by invitation); Purdue University, Lafayette, Ind.; sponsored by Agricultural Research Institute and National Academy of Sciences-National Research Council; Dr. C. B. Cox, Agricultural Economics Department, Purdue University.

Oct. 19-20—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; chm., Berton Maxwell, Poultry Producers of Central California, Petaluma.

Oct. 20-21—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 22 — North Dakota Turkey Federation; American Legion Hall, Cooperstown; sec., Irving J. Mork, Department of Poultry Husbandry, North Dakota Agricultural College, State College Station, Fargo.

Oct. 22-23 — Annual Stockholders Meeting, Cooperative G.L.F. Exchange, Inc., Onondago County War Memorial Building, Syracuse, N.Y.

Oct. 22-23—Iowa Seed Dealers Assn.; Savery Hotel, Des Moines; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines 9, Iowa.

Oct. 23—Arkansas Poultry Study Day; University of Arkansas, Fayetteville; Prof. Robert M. Smith, Department of Animal Industry and Veterinary Science.

Oct. 29—Nebraska Feed & Nutrition Conference; University of Nebraska, Lincoln; chm., Dr. John Adams, Poultry Husbandry Department.

Oct. 29-30—West Virginia Feed Dealers Assn.; Blackwater Falls Lodge, Davis; sec., J. S. Larrick, Beckley Ice & Feed, Beckley, W. Va.

Oct. 30—Rooters Day; University of Nebraska, Lincoln; Dr. E. R. Peo, Animal Husbandry Department.

Oct. 30—Illinois Sheep Producers Day; University of Illinois, Urbana; chm., Dr. U. S. Garrigus, Department of Animal Science.

Nov. 1-4—Mississippi Poultry Improvement Assn., Biloxi; Dean & Director, Division of Agriculture, Mississippi State University, State College, Miss.

Nov. 4-5—Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan, Kansas.

Nov. 4-5—Illinois Feed Assn. and Illinois Poultry Improvement Assn., joint convention; Armory, Spring-

CALENDAR FOR 1959-60

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field, Ill.; IFA, Leland Hotel; sec., Dean M. Clark, Board of Trade Bldg., Chicago; IPIA, St. Nicholas Hotel; sec., Aubrey Harless, Box 91, Shelbyville, Ill.

Nov. 4-7 — National Renderers Assn., Hollywood Beach Hotel, Hollywood Beach, Fla.; sec., Miss Jamie Fox, 30 N. La Salle St., Chicago 2, Illinois.

Nov. 5-6—Florida Nutrition Conference; Medical Center Auditorium, University of Florida, Gainesville; sponsored by Florida Feed Dealers Assn. and Florida Agricultural Experiment Station; chm., Dr. J. P. Feaster, Department of Animal Husbandry and Nutrition.

Nov. 6-7—Oklahoma Formula Feed Conference; Oklahoma State University, Stillwater; chm., Dr. Rollin H. Thayer, Poultry Science Department.

Jackson Blvd., Chicago 4, Ill.

Nov. 12-13—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. F. W. Hill, Poultry Husbandry Dept., Cornell University, Ithaca, N.Y.

Nov. 11-13—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. M. L. Scott, Poultry Husbandry Department, New York State College of Agriculture, Cornell University, Ithaca, N.Y.

Nov. 13-14 — Oregon Sheep and Wool Days, Oregon State College, Corvallis; chm., Dr. C. W. Fox, Dairy & Animal Husbandry Dept.

Nov. 16—Tennessee Feed Manufacturers Assn., Claridge Hotel, Memphis, Tenn.; sec., Charles H. Warfield, American Trust Bldg., Nashville, Tenn.

Nov. 16-17—Washington Animal Industry Conference; Yakima Junior College, Yakima, Wash.; John G. Wilson, Washington State Feed Assn., Inc., 814 Second Avenue Bldg., Seattle 4.

Nov. 18—School for Poultry Servicemen; University of New Jersey, Agricultural Experiment Station, New Brunswick; chm., R. L. Squibb, Department of Poultry Science.

Nov. 19-20—National Swine Industry Conference; Iowa State University, Ames; chm., Keith Myers, National Swine Growers Council, Grundy Center, Iowa.

Nov. 21—Missouri Sheep Day, University of Missouri, College of Agriculture, Columbia; C. V. Ross, Department of Animal Husbandry.

Nov. 22-24—Western Grain & Feed

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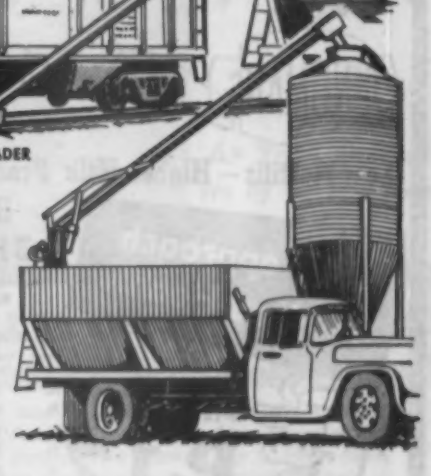

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	FIRST TEST			SECOND TEST (in 60 days*)			
Herds Tested	Quarters Tested	Clear	Infd.	Quarters Tested	Clear	Infd.	Percent Cleared
A.	32	21	11	28	28	0	100%
B.	95	76	19	112	108	4	79%
C.	80	34	46	68	55	13	72%
D.	68	52	16	68	64	4	78%
E.	74	38	36	79	72	7	81%
F.	83	69	14	78	76	2	85%
G.	60	34	26	44	39	5	81%
H.	36	27	9	28	26	2	77%
I.	16	11	5	16	15	1	80%
J.	22	16	16	28	25	3	81%
K.	48	41	7	60	59	1	86%
Aids in Reduction of SCOURS	624	419	205	609	567	42	79.5%

Aids in Prevention or Treatment of FOOT ROT

Aids in Reduction of RESPIRATORY INFECTIONS

INDICATION OF SEVERITY OF INFECTION

Degree	1st Test	2nd Test
Slight	94	30
Infected (Mastitis)	65	9
Chronic (Mastitis)	45	3
Total	205	42

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JAPANESE VISITORS—Two Japanese visitors on the Kansas State University campus at Manhattan, Kansas watch as Louis Aicher, former Kansas State staff member and group leader, demonstrates the operation of a bagging machine in the university's pilot feed mill. At left is Yoshiaki Kamei, managing director of the National Federation of Food Enterprise Cooperatives, Tokyo, and at right is Shozo Morohashi, an official with the grain division of Nichimen Co., Ltd., also of Tokyo. The two Japanese are with a party of nine who are spending two months in the U.S. to observe and study the handling of food, feed and seed grains.

Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines 9, Iowa.

Nov. 27-28—American Society of Animal Production; Sherman Hotel, Chicago, Ill.; sec., Dr. H. H. Stonaker, Colorado State University, Ft. Collins, Colo.

Nov. 30-Dec. 1—Midwest Veterinary Nutrition Conference; President Hotel, Kansas City; sec., Lloyd Larson, Midwest Feed Manufacturers Assn., 20 W. 9th Street Bldg., Kansas City 5, Mo.

Dec. 2—Ontario Retail Feed Dealers Association; King Edward Sheraton Hotel, Toronto; sec., Murray McPhail, 69 Yonge Street, Toronto.

Dec. 3-4—North Carolina Animal Nutrition Conference; North Carolina State College, School of Agriculture, Raleigh; chm., E. R. Barrick, Head, Animal Husbandry Section.

Dec. 4-5 — Arkansas Turkey Convention and Show; Berryville, Arkansas; sec., Charles D. Hawks, P. O. Box 1446, Little Rock.

Dec. 7-9—Minnesota Poultry Assn., Radisson Hotel, Minneapolis; sec., L. L. Baumgartner, Litchfield, Minn.

Dec. 8-9 — Poultrymen's Service Clinic; Cornell University, Ithaca, N.Y.

1960

Jan. 4-5—Kansas Formula Feed Conference; Kansas State University, Manhattan, Kansas.

Jan. 4-8 — Retail Feed Dealers Training School; University of Minnesota, St. Paul; Dr. J. O. Christianson, Director of Agricultural Short Courses, Institute of Agriculture, St. Paul 1.

Jan. 5-7—National Turkey Federation; Hotel Leamington, Minneapolis; sec., M. C. Small, P.O. Box 69, Mt. Morris, Ill.

Jan. 17-19—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis, Ind.; sec., Fred K. Sale, 600 Board of Trade Building, Indianapolis, 4, Ind.

Jan. 25-27 — Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec. Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 2-4 — American Dehydrators Assn.; Broadmoor Hotel, Colorado Springs; exec. vice pres., Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 4-5—Oregon Animal Industry Conference; Oregon State College, Corvallis, Ore.; chm., Dr. J. E. Parker, Poultry Husbandry Department.

Feb. 8-9—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry Dept.

Feb. 8-9—Midwest Feed Manufacturers Assn.; Muehlebach Hotel, Kansas City; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg. Kansas City 5, Mo.

Feb. 10-11—Pacific Northwest Feed Mill Production School; Chinook Hotel, Yakima, Wash.; sponsored by

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Washington State Feed Assn., mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4, Wash.

Feb. 11—Boston Grain and Flour Exchange Annual Banquet; Sheraton-Plaza Hotel, Boston; chm., Paul Sutliff, 177 Milk St., Boston, Mass.

Feb. 12—Washington State Feed Assn.; Chinook Hotel, Yakima, Wash.; annual convention; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4, Wash.

Feb. 12-14—Fact Finding Conference, sponsored by the Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 59 East Madison, Chicago, Ill.

Feb. 21-23—Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., G. E. O'Brien, 694 N. Ohio Street, Greenville, Ohio.

Feb. 23-24—Virginia Feed & Nutrition Conference; Hotel Roanoke, Roanoke; J. Paul Williams, sec., Virginia State Feed Assn., 615 E. Franklin St., Richmond, Va., or Prof. Paul M. Reaves, Department of Dairy Science, Virginia Polytechnic Institute, Blacksburg, Va.

March 7-8—Grain & Feed Dealers National Assn.; Hotel Muehlebach, Kansas City; sec., Herbert L. Sharp, 400 Folger Bldg., Washington 5, D.C.

March 17-18—Oregon Feed & Seed Dealers Assn.; New Sheraton Hotel, Portland, Ore.; mgr., Russ Hays, 702 Lewis Bldg., Portland, Ore.

Mar. 17-18—Maryland Nutrition Conference; Shoreham Hotel, Washington, D. C.; chm., Richard D. Creek, University of Maryland, Department of Poultry Husbandry, College Park.

March 23—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati; sponsored by Distillers Feed Research Council; exec. director, Dr. Lawrence E. Carpenter, 1232 Enquirer Bldg., Cincinnati, Ohio.

April 1-2—Texas Grain & Feed Assn., Shamrock Hotel, Houston; sec., Ray B. Bowden, 407 Fort Worth Club Bldg., Ft. Worth 2, Texas.

April 5-7—Nebraska Grain & Feed Dealers Assn.; Pershing Municipal Auditorium, Lincoln; sec., Howard W. Elm, Trust Bldg., Lincoln, Neb.

April 11-13—Poultry and Egg National Board, LaSalle Hotel, Chicago, Ill.; mgr., Floyd Geil, 8 S. Michigan Ave., Chicago 13, Ill.

April 21-23—California Hay, Grain & Feed Dealers Assn., Ambassador Hotel, Los Angeles; sec., John Gilmore, Blue Anchor Bldg., 1400 10th St., Sacramento 14, Cal.

April 21-23—Kansas Grain & Feed Dealers Association; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

April 22 — Nebraska Livestock Feeders Day; University of Nebraska, College of Agriculture, Lincoln; chm., Wm. J. Loeffel, Animal Husbandry Dept., Lincoln 3, Neb.

May 9-11—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 4, Ill.

DR. GOSS RETIRES

SACRAMENTO—Dr. Harold Goss, professor of animal husbandry, University of California, retired recently after more than 40 years of teaching and research here. Dr. Goss conducted research on the biochemistry of the processes involved in mineral metabolism, vitamin requirements and calcium metabolism during pregnancy and lactation in animals.

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Canadian Egg Support Payments Explained

WINNIPEG—Egg price support to Canadian producers by means of deficiency payments under the Agricultural Stabilization Act will begin with the marketing year starting Oct. 1, 1959.

The announcement by L. A. Pearsall, chairman of the board, said purchases of eggs by the board will be discontinued Sept. 30.

This, he pointed out, implements the policy announced in the House of Commons May 7 by Douglas S. Harkness, minister of agriculture. At that time the minister stated that he had directed the board to develop a procedure for providing price support for eggs by means of deficiency payments to producers to replace the present method of providing support through purchases of eggs by the board. The minister added that a limitation would be placed on the amount of deficiency payment made to a producer in a given time.

Payments to any one producer during a 12-month period will be limited to 4,000 dozen grade A large size eggs, including grade A extra large. Each producer marketing eggs through registered egg grading stations will be eligible to participate in deficiency payments up to this maximum regardless of the total volume of eggs marketed by him.

A national average price received by producers for grade A large eggs at registered egg grading stations will be used to determine whether a deficiency payment is required and, if so, the rate of such payment per dozen eggs. The rate of payment will be uniform to producers in all parts of Canada regardless of the price received in the market.

It is proposed that, should deficiency payments be necessary to support average prices at the prescribed level, they will be made on an annual basis. Consideration will, however, be given to making an interim payment for the October-December, 1959, period if the average producer price falls substantially below the prescribed price during that period.

The stabilization board, stated Mr. Pearsall, is now in the process of registering producers. He said in order to be eligible for deficiency payments, any producers who have not yet registered should do so promptly. Registration is limited to one person for each farm and all sales of eggs from that flock must be made in the name of that person. Application forms, he added, are available at all registered egg grading stations.

CREAMERY EXPANDS

BUFFALO, MINN.—The Buffalo (Minnesota) Co-op Creamery is expanding its facilities and taking over the Osborne-McMillan elevator, according to a recent announcement. The creamery is installing a larger feed mill. The plant will also sell Jim Farmwell feeds, as well as the Land O'Lakes brand.

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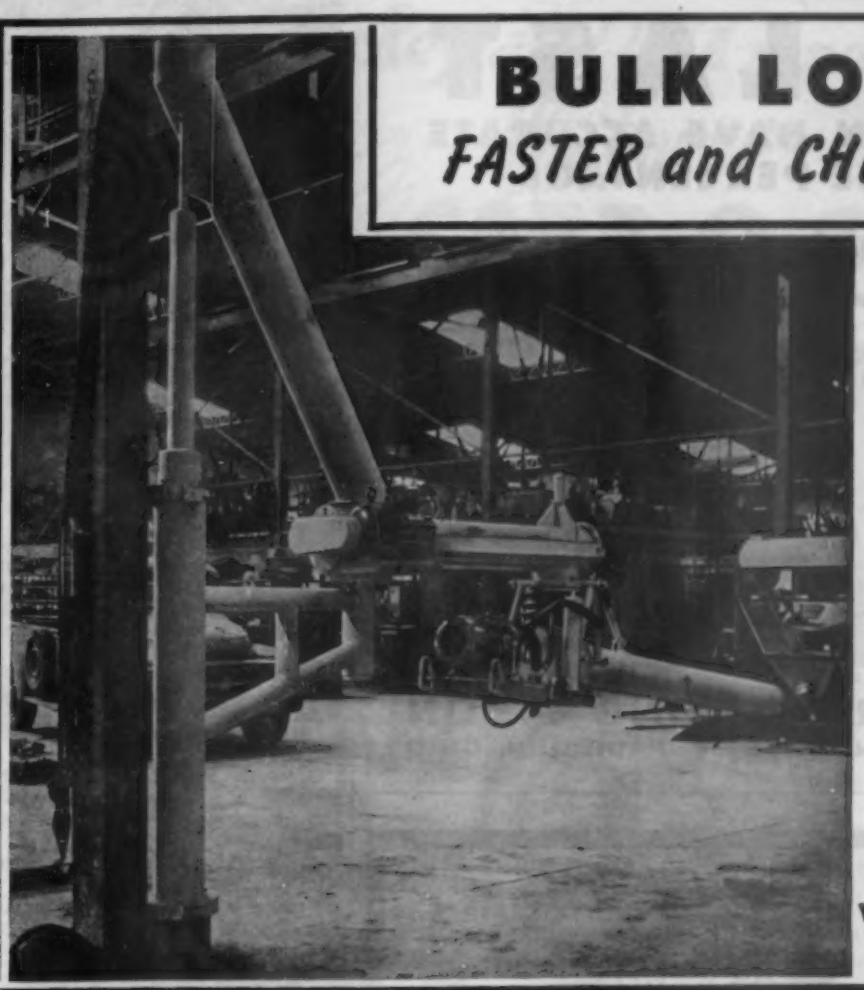

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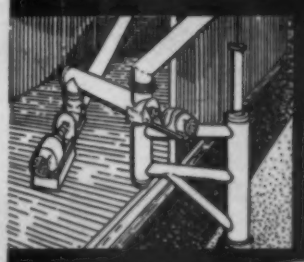

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Beef Cattle Future, Experiments with Pellets, Wet Corn, Additives Reviewed

By Special Correspondent

WASHINGTON C.H., OHIO—A review of beef cattle feeding experiments and future trends in the beef cattle business were discussed at the ninth annual summer meeting of the Ohio Beef Cattle Feeders Assn. at Washington C.H. recently.

A keynote speaker of the day was Dr. P. H. Stephen, Farm Credit Administration, Wichita, Kansas.

It was two years ago that Dr. Stephen called the "shots" on the beef cattle picture—and they proved to be quite accurate. He made predictions again this year. Here are some of them:

"The price peak for beef cattle will be in 1960—probably in January.

"The peak will be lower in 1960 than it was in 1952. Part of this will be due to the fact that there are fewer 'drug store cowboys' in the business now than in 1952."

Dr. Stephen does not expect beef cattle prices to go as low as they did in 1955.

"Beef cattle numbers will reach their peak sometime in 1963 or 1964," according to the agricultural economist. "It will be over 110 million head. Pricewise, to the producer, this peaking would be much better if it were to happen in 1966.

"Beef cattle numbers have been building up in the past few years," Dr. Stephen pointed out. "And though our people population has been increasing, it has not been great enough to absorb the extra increase in beef production.

"Therefore, beef cattle producers are facing a decline in beef prices for the next 3 or 4 years—and there will continue to be an increase in meat numbers during this period. There will also be a moderate rise in the number of cattle to be slaughtered," he said.

"If there is a run on the market, prices could break so low that it wouldn't make any difference how cheaply the cattle were fed. It should be remembered, however, that efficient feeding—and efficient cattle—can oftentimes make the difference between profit and loss."

Dr. E. W. Klosterman, Ohio Agricultural Experiment Station, Wooster, reported on feeding experiments with pellets, high moisture corn and feed additives.

Research findings concerning the pelleting of hay by Dr. Klosterman and his associates seem to bear out these points:

- Consumption efficiency is better with pelleted hay.
- Storing and handling of pellets are less of a problem.
- Costs of pelleting are quite high.

During the past year beef cattle at the Ohio Experiment Station have been fed alfalfa hay in the long, chopped and pelleted forms.

During a 200-day period of this feeding trial it was found that there was little difference in the rate of gain when long or pelleted hay was used, according to Dr. Klosterman. Chopped hay, on the other hand, gave slightly better results than the other two methods, he said.

When the total picture was analyzed, Dr. Klosterman felt that the benefits of beef gains on pelleted hay were not great enough to pay for the costs of pelleting. There were advantages, however, including storage and handling.

High moisture corn has aroused the interest of beef cattle feeders. This method of feeding, Dr. Klosterman claimed, is catching on rapidly. It makes for easier harvesting and probably more efficient feeding.

He said that although considerable more research work will have to be done, results show thus far that high moisture corn harvesting cuts down losses considerably in the field.

There is also a better feed efficiency with high moisture corn—probably due to organic acids formed in the process of fermentation, according to Dr. Klosterman.

Work is now being done by Dr. Klosterman in stepping up the amounts of organic acids than would be normal in the usual feeding program to see what this will do to feeding efficiency.

He pointed out, however, that high moisture corn should not be thought of as a replacement for corn silage.

Stilbestrol has been experimented with long enough now to show that it can be recommended for use in beef cattle feed. There seems to be no apparent difference if it is put in the feed or used as an implant, the researcher said.

Results from the use of antibiotics have not been consistent, it was reported. Dr. Klosterman felt that it is up to each feeder to decide if he wants to use antibiotics.

If the feeder maintains a high degree of sanitation and feedlot free of diseases, antibiotics would not have a part to play in the over-all picture, he said. However, if sanitation and the other factors have been neglected for some reason, then antibiotics can prove to be most helpful.

Although considerable publicity has been given the use of tranquilizers with cattle, Dr. Klosterman feels that most of the results thus far have not shown any great benefit.

Enzymes also have shown doubtful results according to the tests made at the Ohio Agricultural Experiment Station.

MEMBERS—Long time members of the Ohio Beef Cattle Feeders Assn. get together at the summer meeting. They are (left to right): Earl Lowe, Kenton, Ohio, second president of the Ohio beef group; Dr. E. W. Klosterman, Ohio Agricultural Experiment Station, Wooster, and James Warner, Ohio State University and secretary of the Ohio Beef Cattle Feeders Assn.

Lanier Feed Mill Opened in Georgia

GAINESVILLE, GA.—Lanier Feed Mill, Inc., a new facility established here to manufacture Swisher brand feeds, recently served 400 invited guests barbecued chicken to celebrate the plant's opening. The corporation has a franchised arrangement with the William Davies Co., Danville, for production of the branded feeds.

Following the barbecue, Dan Lavery, general manager, William Davies Co., explained how the franchise agreement can benefit area feeders by "bringing the full value of the company's research program to the region" through the Swisher Feeds manufactured by Lanier Feed Mill.

Max Ward is president of the Lanier firm, and Homer Wilson is executive vice president. Other members of the board of directors are John L. Cromartie, Joe M. Tankersley, C. A. Bruce, Mrs. Edna Wilson and Mrs. Bernice Bruce.

California Produce Act Provisions Spelled Out

SACRAMENTO—Price agreements between dealers and producers of farm products must be set forth in contracts under the Produce Dealers Act enacted by the 1959 Legislature.

The amendments provide that dealers in farm products licensed under the provisions of the act may not obtain any farm products from a producer except by a contract of purchase and sale, or a contract of agreement to purchase, wherein the price to be paid by the dealer is designated in the contract.

J. C. Harlan, chief of the California Department of Agriculture's bureau of market enforcement, said there has grown up within the industry a practice by producers and dealers whereby farm products are shipped into receiving markets and received by dealers without any definite price agreement.

Such indefinite arrangements have been classified as "open price," "delayed price" or "delayed billing," and have resulted in much controversy between the parties on final settlement.

The Produce Dealers Act as amended will prohibit such methods of doing business and will require dealers either to contract for farm products at an agreed and designated price, or to obtain commission merchants' licenses and conform to the requirements applying to commission merchants in accounting to the producer from whom the products were received.

The amendments relate to the Produce Dealers Act only and do not affect the Processors Law under which farm products are handled by canneries, wineries and frozen food plants for processing purposes.

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'Task Force' to Explore Poultry Export Ideas

WASHINGTON — A government-industry "task force" has been designated to explore new ways to expand sales of American poultry products abroad, it was announced recently by Rep. Charles H. Brown (D., Mo.), chairman, poultry industry subcommittee of the House Small Business Committee.

"I am convinced," he said, "that American poultrymen can sell more broilers, turkeys and eggs in foreign markets. Some progress has been made in expanding poultry export sales, but even so, total exports are but a fraction of 1% of the poultry industry's sales."

Following a meeting with officials in the U.S. Department of Agriculture, the State Department and the Export-Import Bank, Congressman Brown commented, "For a long time, some of us have been urging more coordinated government effort to help American poultrymen break through the trade barriers, refrigeration problems and other blocks that now restrict poultry exports. At long last, we have made a start in this direction . . ."

Ray Ioanes, USDA, was named chairman of the government task force by Mr. Brown, and industry spokesmen will be representatives of the various producer and supplier associations.

The group, said Mr. Brown, is expected to hold its discussions this fall and report to the Congress early next year.

"Our committee is also trying to get the Secretary of Agriculture to make broader use of poultry products in the school lunch program, and in surplus food distribution in depressed areas of the U.S.," Congressman Brown stated. "Our committee has had two sessions with USDA officials on this matter. Each time, we have been told that the department of agriculture is considering it. But we're still waiting for a yes or no answer. I hope they give us a favorable decision soon."

Dairy Nutrition Studies

NEW YORK—The only known duodenal fistulated steers in the country are being used in studies at Michigan State University under a grant-in-aid from American Cyanamid Co., New York. The five-year program in dairy cattle nutrition is under the direction of Dr. C. A. Lassiter. Dairy steers have been fitted with rumen and duodenal fistulas so that studies can be made with Aureomycin chlortetracycline, tranquilizers and other feed additives to determine their effect on digestion and absorption. The university has recently accepted a grant from Cyanamid to help finance this year's work.

Turkeyland USA reports on Whitmoyer CARB-O-SEP
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NO BLACKHEAD OUTBREAKS ON CARB-O-SEP
Not one case of blackhead with CARB-O-SEP fed birds, although blackhead was prevalent through his entire area reported a mid-western serviceman.

CHAMPIONS CARB-O-SEP FED
CARB-O-SEP fed birds dominated the championships at the Michigan Turkey Festival. Five Grand Champion birds and the Largest Bird at the Show were CARB-O-SEP fed.

FEED MANUFACTURER TESTS CARB-O-SEP AGAINST ANOTHER LEADING PREVENTIVE
No outbreaks on CARB-O-SEP . . . three outbreaks in other group. CARB-O-SEP birds were in better shape at marketing . . . feed conversion was better.

PENNSYLVANIA GROWER ENDS RANGE BLACKHEAD PROBLEM
Blackhead outbreaks were an annual problem. Last year he tried CARB-O-SEP and raised top quality birds—with no blackhead losses.

BREEDER AND GROWER PUTS ALL HIS TURKEYS ON CARB-O-SEP
5,000 breeders and later in the season 30,000 meat birds put on CARB-O-SEP. Fertility and hatchability good.

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CARB-O-SEP FED BIRDS WIN AT NATIONAL TURKEY CONVENTION
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IN CANADA—WHITMOYER LABORATORIES, LTD., PORT CREDIT (Toronto Twp.), ONT.

SALESMEN HONORED—Hess & Clark, Inc., Ashland, Ohio, recently honored its 1958-59 "sterling salesmen" at its national sales meeting. Each received an engraved sterling silver piece. Pictured are (left to right, back row): Lyons P. Miller, Louisville, Ky.; Donald L. Kassar, Mason City, Iowa; A. J. Kuncl, Jr., Ames, Iowa; Charles L. Arthur, Geneva, N.Y., and Edward W. Maddock, Oklahoma City. In the front row (left to right) are: Lyle L. Lane, Effingham, Ill.; Robert H. Schneider, Monroe, N.C.; W. R. Walters, Reidsville, Ga.; Paul K. Schantz, Harrisonburg, Va., and Kenneth A. Bohnhoff, Beaver Dam, Wis.

Hess & Clark, Inc. Honors Salesmen

ASHLAND, OHIO—Ten salesmen of Hess & Clark, Inc., Ashland, received engraved sterling silver pieces for "sterling salesmanship" in 1958-59 at the company's recent national sales meeting. The awards were presented by Russell H. Eshelman, vice president, marketing.

Six of the ten became new members of the firm's Sterling Silver Club, three were second time winners and one man received his third consecutive award. All were guests of president Richard D. Waters and incoming president Hermon A. High at the annual Sterling Club President's Breakfast.

Named for the first time were: Kenneth A. Bohnhoff, Beaver Dam, Wis.; Lyle L. Lane, Effingham, Ill.; Edward W. Maddock, Oklahoma City; Lyons P. Miller, Louisville, Ky.; Paul K. Schantz, Harrisonburg, Va., and W. R. Walters, Reidsville, Ga.

Receiving their second awards were: Charles L. Arthur, Geneva, N.Y.; Donald L. Kassar, Mason City, Iowa, and Robert H. Schneider, Monroe, N.C.

Joseph A. Kuncl, Ames, Iowa, was selected for the third straight time. He has been named "sterling salesman" each year since the awards were first started in 1957.

Another highlight of the meeting was the appearance of Red Foley and his troupe who put on a two-hour performance at the Ashland Theatre for the sales group, Hess & Clark's Ashland employees and their families, and special guests. Foley is sponsored Saturday noons by Hess & Clark on NBC Radio's Monitor Network.

The week-long sales meeting was attended by all Hess & Clark district managers, feed specialists and territorial sales representatives. Sales opportunities and objectives for the company's feed medications and animal health products during the next six months were stressed, along with a complete review of all products in the Hess & Clark line.

A new product, Fine Flock Booster Crumbles, was introduced in the animal health line. The new product is designed to reduce the effects of stress, and to help prevent laying slumps. It contains nf-180 and a vitamin combination.

The importance of research was stressed by Dr. Paul D. Harwood, vice president and director of research. He noted the many advancements resulting from the discovery and use of the nitrofuran drugs and predicted that even more startling applications for Hess & Clark nitrofuran products would be forthcoming through future research.

To be completed later this fall is the company's $500,000 nutrition research center which will provide facilities for evaluation of the nutritional aspects of various drugs used for improving livestock and poultry health.

Mr. Waters, the company president, said, "Our objective is to find and develop drugs that when added to the rations of normally healthy livestock or poultry enable the farmer to produce meat, milk or eggs, more profitably. This includes not only our nitrofuran products, but antibiotics, hormones, tranquilizers and anthelmintics. The interaction of these various drugs will also be evaluated."

Florida Legislator Asks Integration Probe

JACKSONVILLE, FLA. — State Sen. Harry O. Stratton of Callahan has suggested that the U.S. Justice Department investigate the "integration" of poultry producers by feed firms. He said the Florida congressional delegation will be requested to ask for the inquiry of the poultry business.

Mr. Stratton criticized large feed firms and said they "evaded the question" in a discussion of contract practices at a meeting here.

The Legislative Reference Bureau in Tallahassee, he said, will draft a resolution passed at the meeting by the state legislative poultry committee.

Mr. Stratton said he would like for the Justice Department to inquire into the practice of feed dealers making contracts with individuals to raise poultry. Feed companies, he said, induce many persons "who know nothing about the poultry business" to invest in equipment and sign contracts to buy feed. He said he would like to see a nationwide investigation to see whether current practices violate fair trade laws.

Mr. Stratton said one of the "most objectionable" features of the contracts is that the feed companies own the poultry but the grower must pay the county taxes. "In our county it would cost a man with 10,000 birds about $300 in personal property taxes," he said.

The legislator said he is "afraid the contract practices will result in a lot of little fellows being thrown out of business." In Florida, he noted, many semi-retired people own poultry farms.

A feed industry spokesman said that his firm resisted for two years the practice of contracting with egg producers but "finally had to do it because of what folks around us were doing."

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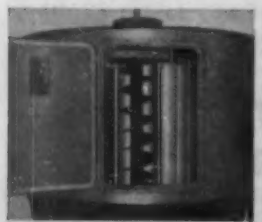

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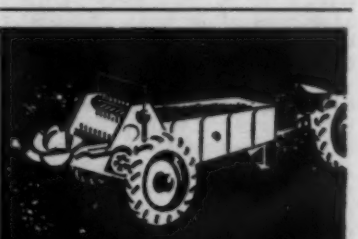

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RESEARCH

(Continued from page 14)

sidered as growing rather than fattening rations.

Increasing the concentrates to 30% produced average gains of 2.39 lb. daily in the three groups. Carcasses of yearlings and two-year-olds on this ration graded low good after 132 days on feed.

In the rations with 60% concentrate, gains averaged 2.33, 3.33 and 3.33 lb. daily for the three age groups. With 80% concentrate in the ration, gains were 2.39, 3.18 and 3.30 for the three groups.

A longer period on the ration with the concentrate-roughage ratio of 30-70 would not seem advisable, the researchers said. A change to a 60-40 or an 80-20 ratio would seem warranted in the last half of the feeding period if slaughter finish is desired.

It was noted that little difference was observed between a 60-40 and 80-20 concentrate-hay pelleted ration.

AUTOMATIC FEEDING — The presentation reporting a feeding frequency trial, attracted much interest among the audience. This trial was prompted by the rapid spread of mechanical feeding equipment, explained W. W. Albert, animal science researcher. This equipment allows more frequent feeding without increasing labor costs. The trial was designed to see if feeding six times daily produces better results than self-feeding or feeding twice daily.

Results of one phase of the study showed that cattle fed six times daily consumed 17% more feed per head daily. They also gained at a 21% faster rate, and converted their feed to meat slightly more efficiently than cattle fed twice daily.

A second phase of the study compared feeding six times daily versus twice daily and self-feeding. Once again steers fed six times a day outperformed steers fed twice daily. They consumed 5% more feed, gained 10% faster and produced a pound of gain on 4.5% less feed.

The self-fed steers consumed more feed than either of the other two groups. But they were intermediate in rate of gain and ranked lowest in feed efficiency.

The six-times-daily feeding was accomplished by a machine that was completely automatic. One timer turned it on at each feeding time; another regulated the length of time it operated, thus controlling the amount of feed available to the cattle.

The trial results indicated that feeding more frequently may have beneficial effects. But Prof. Albert declared that further studies are needed to determine the best feeding schedules under various conditions.

SILAGE—The "high energy" silage report was given by A. L. Neumann, head of the beef cattle division. This trial studied the feeding value of equal parts of third-cutting alfalfa and high-moisture picker-shelled corn ensiled together. Steers fed this ration were given 2 lb. of hay daily in addition to the silage.

The researchers also wanted to find out the effects of adding soybean oil meal and dicalcium phosphate to the high energy silage.

Results showed that steer calves receiving the silage, but no meal or dicalcium phosphate, made an average daily gain of 2.43 lb. Their feed cost for each hundred pounds of gain was $12.06.

Steers receiving the silage and dicalcium phosphate, but no meal, averaged 2.46 in daily gains. For each 100 lb. of gain, the cost was $11.78.

The highest rate of gain, 2.71 lb. daily, was made by steers receiving the silage, meal and dicalcium phosphate. However, their feed cost per hundredweight of gain was $12.37.

Control steers fed corn silage, shelled corn, hay and soybean oil meal gained 2.38 lb. daily at a cost of $13.82 per hundredweight of gain.

Dr. Neumann summarized his report by saying that this high energy silage made an "excellent fattening ration for beef steers without the addition of either phosphorus or protein."

HIGH MOISTURE CORN—Whether or not high-moisture shelled corn stored in conventional silos can equal the feeding value of regular No. 2 corn prompted the fourth study. George E. Mitchell, Jr., animal science researcher, explained that corn containing moisture levels of 15, 24, 29 and 35% was used in the test. All the corn was stored in conventional upright silos.

Here are the results: Three lots of heifers that received corn containing 15, 24 and 29% moisture, respectively, made approximately the same gains of 1.9 lb. daily. The average feed they required for each 100 lb. of gain was 1,045 lb.

Corn containing the 35% moisture level did not perform as well, though. Heifers receiving this corn averaged only 1.51 lb. daily gain and required 1,194 lb. of feed for 100 lb. of gain. Mr. Mitchell noted that feed consumption was less for this corn than for the drier corns.

Harvesting losses were lowest at the 29% moisture level. Nutrient losses were less than 5% while the high moisture grain was in the silo.

TAPAZOLE AND ENZYME — It was noted that in a 68-day test in 1958, Tapazole-fed steers gained 2.57 lb. daily, compared with 2.38 lb. for control steers. Because the gain advantage disappeared quickly at the end of the test, a repeat was conducted this year with this goitrogenic substance. In an Iowa test, Agrozyme produced gain responses in steers fed dry corn but not in those fed high-moisture corn. Thus, this additive was included in the Illinois additive test this year, and one lot of steers received both additives.

The fattening steers in the test were full-fed a ration of "high energy" alfalfa-corn silage (60:40 mixture of fresh alfalfa and dry ground shelled corn mixed at silo-filling time) plus soybean oil meal, hay and additives for 97 days. These steers had already been on full feed for 112 days in a previous test, which accounted for rather low gains in this test. Each lot contained stilbestrol-implanted and non-implanted steers, allotted so that the hormone treatments were equally divided.

As in the 1958 test, Tapazole produced an immediate and rather dramatic gain response, the researchers reported. After 28 days the two lots on Tapazole were gaining at a rate of 3.59 and 3.41 lb. a day, respectively, compared with 2.31 lb. for the control steers. During the remainder of the test, however, these steers were outgained by the controls, the net result being a reduction in average daily gain for the 97-day period. These results, said the researchers, do not imply that there is no place for this additive in cattle feeding; rather, they indicate that more work needs to be done to determine its possible future use.

In this test with fermented corn, Agrozyme had no effect on gains or feed efficiency, whether fed singly or in combination with Tapazole.

There was no correlation between

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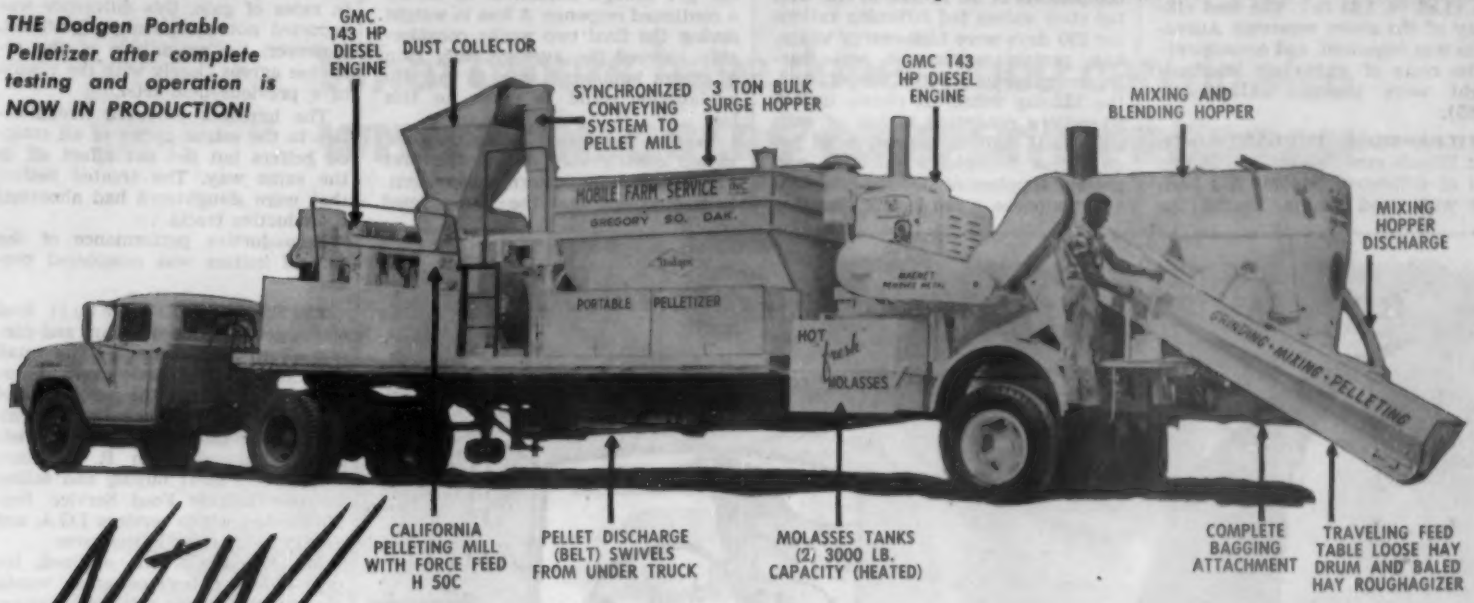
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"THIS REVOLUTIONARY MACHINE IS CAPABLE OF PELLETING UP TO 6 TONS OF FEED IN ONE HOUR . . . ON THE FARM . . . USING THE FEEDER'S GRAIN AND HAY"

SAYS . . . WALTER RASCHKE
MOBILE FARM SERVICE, INC.
GREGORY, SOUTH DAKOTA

During the last five years, Dodgen Industries have been aware of the changing trends in the feed industry. Dodgen, leaders in the development of Bulk Feed Handling Equipment, developed the All Purpose Bulk and Bag Body and the NEW "T" Model Bulk and Bag Body to meet changing trends. NOW, Dodgen is introducing the first successful PORTABLE PELLETIZER AS A COMPLETE ON THE FARM FEED PLANT. Incorporating the California Pellet Mill, this revolutionary machine is capable of pelleting up to 6 tons of feed in one hour of operation . . . ON THE FARM . . . USING THE FEEDER'S OWN GRAIN AND HAY.

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No more need to take grain off your farm to have it ground, pelleted and delivered back. Here is a practical system that can come to you, and save you time, labor and dollars out of your pocket.

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Now you can have a TOLL MILL RIGHT ON THE FARM. Grain storage, handling and processing is best done at the grain supply.

The Dodgen Portable Pelletizer can change your whole concept of feed processing and bring about greater service, profits and satisfaction. During the Midwest Feed Production School, Kansas City, a complete movie will be available to illustrate the complete operation now offered by this new unit. Plan now to visit with Dodgen Industries during this session or write for complete data covering the DODGEN PORTABLE PELLETIZER.

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"Does the work of two trucks." Dodgen All-Purpose with Front delivery, Synchronized auger system and selective unloading is the big answer to efficient bulk feed handling.

MEET . . . the owner . . . the manufacturer of the DODGEN PORTABLE PELLETIZER during the Midwest Feed Production School in Kansas City.

SEE the complete film covering the operation of this new Portable Pelletizer.

DODGEN "T" MODEL BULK AND BAG BODY

Now for only $1,275, you can convert your truck into a complete bag and bulk body. Write for specifications.

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hormone treatment and response to the additives tested.

ANTIBIOTIC TEST—The Illinois researchers said corn silage adequately supplemented with protein and calcium is an excellent wintering ration for beef calves. A 112-day test was conducted to check the effect of daily addition of Aureomycin to a wintering ration of corn silage, soybean meal and alfalfa hay for steer calves. Aureomycin at the rate of 75 mg. per steer daily was mixed with soybean meal of one lot.

The Aureomycin significantly increased daily gains approximately 12% (1.86 vs. 1.63 lb.). The feed efficiency of the steers receiving Aureomycin was improved, and consequently the costs of gain per hundredweight were lowered ($11.33 vs. $12.55).

STILBESTROL IMPLANTS—In most Illinois experiments, the 36-mg. level of stilbestrol implant has been used with good results. During the past year, steers implanted at various levels were needed for a study of some physiological effects of stilbestrol treatment. This work also provided an opportunity to compare gains of steers implanted at different levels. Objectives of the portion of the study concerned with rate of gain were (1) to determine the optimum level of stilbestrol implant for full-fed steer calves and (2) to determine the optimum level of stilbestrol to use for double implantation of steer calves fed in wintering and finishing phases.

The implants consisted of 0, 12, 24, 36 and 48 mg. of stilbestrol. The basic components of all rations in one trial for steer calves fed fattening rations for 230 days were high-energy silage, hay, protein supplement and free-choice minerals. In the second trial, the 112-day wintering phases included rations consisting mainly of corn silage and 2 lb. of hay per head per day, plus free-choice minerals and protein supplement. During the final 167-day phase, a full feed of corn was fed with either hay or corncobs, soybean oil meal and minerals. In this trial, each steer was reimplanted at the original level at the end of 175 days.

While implanting produced significant increases in rate of gain, none of the differences among the implanted groups was statistically significant. However, it was apparent that the 24- and 36-mg. implants produced the most desirable response in the first trial. A check of periodic weights showed that the 12-mg. implant performed poorly during the last two months of the experiment. The probable reason was that the animals did not get enough stilbestrol to induce a continued response. A loss in weight during the final two weeks considerably lowered the average daily gain of steers implanted with 48 mg. No explanation could be given for this loss.

In the two-phase trial, response varied considerably during the first 112 days, but no pattern was evident. It is apparent that the 12-mg. level was not adequate in the finishing phase. Average daily gains for the entire 279 days were essentially equal for double implants of 24, 36 and 48 mg. The data also suggest that an initial implant of 12 mg. followed by an implant of 24 or 36 mg. can be expected to give equally good results.

SYNOVEX FOR HEIFERS—Also reported was a test on the influence of Synovex-H on rate of gain and reproductive performance of beef heifers. High-moisture corn rations were fed for 112 days.

The Synovex-H increased average daily gain by 11.6% (1.93 vs. 1.73 lb.). Because of the great variability in rates of gain, this difference was reported not statistically significant. However, the magnitude of the response agrees closely with the results of a previous field trial.

The implants produced irregularities in the estrus cycles of all treated heifers but did not affect all in the same way. The treated heifers that were slaughtered had abnormal reproductive tracts.

Reproductive performance of the control heifers was considered normal.

TYPES OF BEEF—Retail food stores generally do not want and cannot afford overfat cattle. The retail cuts from such cattle contain too much fat, and thus the percentage of salable meat is reduced. Overfat cattle force retailers to increase their prices, declared Irvin R. Rinehart, who directs meat buying and selling for the Godfrey Food Service, Inc., Milwaukee, which services I.G.A. and Sentry food stores in that area.

Mr. Rinehart's talk outlined the type of beef today's consumer wants. He explained how retail food stores must select beef that will meet the consumer's demands and will also return a profit. He said that retail prices on overfat high choice or low prime cattle must be raised in order to get the same return that less fat cattle bring. Therefore retailers usually turn down cattle that carry too much external and internal fat. Actual consumer tests show that homemakers shy away from beef displaying too much fat, even though it has the best taste.

Size or weight of beef carcasses plays an important role, Mr. Rinehart continued. Large carcasses yield large-sized cuts that require a higher price per pound. Size often slows up sales of the more expensive cuts, such as steaks and roasts, because homemakers will not pay the price. Mr. Rinehart believes that 500- to 600-lb. carcasses that provide medium-priced cuts are the best sellers.

Retailers also prefer beef that yields pink-colored lean meat. Beef that has a bluish or grayish cast is not so desirable, because homemakers may think it is not fresh.

CK Econolass

Don't Mix Without

(85% Feeding Cane Molasses Equivalent)

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It means added palatability for your feeds and an easier mixing job for you. CK Econolass is never sticky — won't harden and ball-up.

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Econolass is another champion from the CK line of feed ingredients which also include

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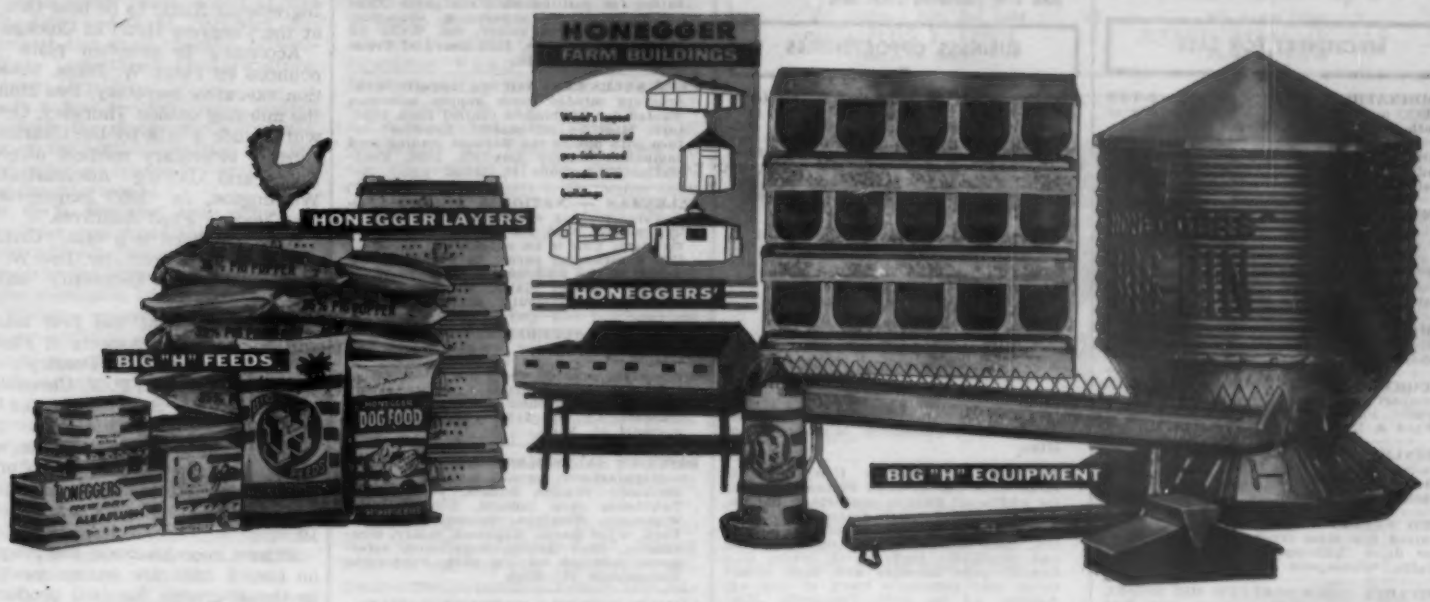

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EXCLUSIVE TERRITORY protection gives the Honegger Dealer plenty of room to grow. A piddling dealer at every little crossroads is not Honeggers' idea of effective distribution.

DEALER TRAINING schools at Fairbury-Forrest and monthly district meetings help Honegger dealers and their sales personnel make sales through service. Their know-how and self-confidence makes selling easy, more effective.

SALES ASSISTANCE from well trained, enthusiastic district managers produces new business and keeps Honegger dealers inspired. Product specialists, such as building and equipment salesmen, help dealers close big sales.

LOCAL PROMOTIONS and "Planned Selling" that move 75-150 tons of feed out of the dealer's stores are not uncommon for Honegger dealers—with bulk of business on cash basis, too. Honeggers help plan and man open houses, hay-makers and ice breakers.

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Classified advertisements received by Tuesday each week will be inserted for the issue of the following Saturday. Rates: 15¢ per word; minimum charge $2.25. Situations wanted, 10¢ a word; $1.50 minimum. In figuring cost of your classified ad . . . each word, abbreviation, telephone exchange and number, set of initials, or group of figures counts as a word. To the number of words in your want ad itself add six (6) words for your name and address or name and address of your firm. This applies for both direct-reply ads and for blind ads containing a box number. If an ad is keyed, care of Feedstuffs, 20¢ per insertion additional charged for forwarding replies. Commercial advertising not accepted in classified advertising department. Display advertising accepted for insertion at minimum rate of $12.00 per column inch. No discount on ads ordered for more than one insertion.

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COMBINATION BULK TRUCK, 9-TON SECO on 1959 GMC 674. Will sell body or both. Owenton Feed Service, Owenton, Ky.

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CAPSTAN CAR PULLER, MARION FEED finisher, Richardson semi-automatic bagger. Zip Feed Mills, Sioux Falls, S. D.

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BAUGHMAN SF5 BULK BODY, THREE compartments; can be mounted on your truck. Phone State 22141, McLaughlin, Ward & Co., Jackson, Mich.

STEINLITE TESTERS, FACTORY REbuilt; models 400C and 105S. Phone State 98141, McLaughlin, Ward & Co., Jackson, Mich.

FEED MIXER, 1-TON CAPACITY, guaranteed first-class throughout, 5 H.P. motor drive. Address Ad No. 5179, Feedstuffs, Minneapolis 40, Minn.

PORTABLE CORN SHELLER MM MODEL "D," mounted on four wheels with VF4 engine. McLaughlin, Ward & Co., Jackson, Mich.

DAFFIN MOBILE UNIT, 3 YEARS OLD, 1958 Ford 700, 25,000 miles, excellent condition. Cash or contract. Lapeer Grain Co., Lapeer, Mich.

WHIRLAWAY AIRBLAST CAR LOADERS, cast iron pulleys, new and used feed and elevator equipment. Hagan Mill Machinery, P. O. Box 574, Jefferson City, Mo.

DAFFIN PORTABLE MIXER AND GRINDer. Good condition. Price $8,000. Jacob J. Vargo, R.R. No. 2, Box 230, Perkasie, Pa.; Telephone ALpine 7-6463.

CALIFORNIA HYFLO PELLET MILL, 1 year old. Damaged in fire. Very low price. Farm Bureau Service Co., Eureka, Missouri.

22-FOOT BAG STACKER — SUITABLE stacking feed, fertilizer, seed or other bagged products — $300. Also Appleton husking bed for cleaning corn — $200. Albert Lea Seed House, Albert Lea, Minn.

DAFFIN MOBILE FEED UNIT—OWNER operated. Mounted on Chev. 30,000 miles and diesel has 1,780 hours. In excellent condition. Located in west central Illinois. Will talk terms. Address Ad No. 5210, Feedstuffs, Minneapolis 40, Minn.

SALE: ALUMINUM TANKS, 22,000, 18,000, 3,000 gal. Dewatering presses; Davenport No. 1A, 3A, Louisville 8-roll 36". 3—Louisville rotary steam tube dryers, 6'x50', 6'x 26', 4' dia. stainless steel spray dryers. Perry, 1403 N. 6th St., Philadelphia 23, Pa.

ONE USED 1952 HIGHWAY TRAILER, equipped for bulk feed delivery, 24 ft. long, complete with full length screw, 15 H.P. gasoline engine, and 2-piece unloading conveyor. Good condition. Contact Fred Cook, Archer-Daniels-Midland Co., Minneapolis 2, Minn.

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FOR SALE—WENGER MOLASSES MIXER, 600 series, 15 H.P. motor; two 2,000 gal. tanks with fitting; Kelly-Duplex cob crusher, 5 H.P. motor; Western pitless sheller No. 24; three 3½ ton bulk bins. Good condition. Dotterer & Son, Bluffton, Indiana.

FOR SALE—ENCLOSED MOTORS; Richardson Scale; truck scales, hammermills; oat crimpers; horisontal and upright feed mixers; sewing machines; elevator legs; screw conveyors; molasses mixers and pellet mills. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

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FOR SALE—J. B. SEDBERRY 18 HAMmer mill, grinder, mixer, sheller, tile building. Heise Feed Store, Bedford, Ind.

FOR SALE — SOUTHERN CALIFORNIA— Feed mill—modern bulk milling equipment. Approximately 12,000 tons mixed feed sales yearly. Address Ad No. 5181, Feedstuffs, Minneapolis 40, Minn.

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DISTRIBUTOR WANTED FOR TEXAS — Nationally known animal health products company wants a reliable distributor with salesmen. Can offer good discount and point of sales helps. Only Dun & Bradstreet listed firms need apply. Address Ad No. 5215, Feedstuffs, Minneapolis 40, Minn.

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VETERINARIAN AVAILABLE FOR NEW product development, clinical testing, F & DA, and technical sales. Experienced. Address Ad No. 5198, Feedstuffs, Minneapolis 40, Minn.

PURCHASING DIRECTOR—TEN YEARS' experience purchasing all types ingredients for multiple plant operation. Address Ad No. 5181, Feedstuffs, 2832 Board of Trade Bldg., Chicago 4, Ill.

AGRICULTURAL RESEARCHER EXPERIenced in animal nutrition and health products seeks a change to technical sales or administration. Address Ad No. 5203, Feedstuffs, Minneapolis 40, Minn.

Controller, Large Integrated Poultry Meat Operation

14 years' diversified experience all phases accounting, cost systems and budgets. Presently serving as comptroller for large, well-known integrated meat bird operation employing 300. In charge of all financial operations connected with feeding, growing out and marketing over 5 million dollars of poultry annually. Seek challenging position in poultry industry. Will relocate. Write Box 5219, Feedstuffs, Minneapolis 40, Minn.

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SALES ENGINEER — FAMILIAR WITH feed milling machinery, pellet mills, coolers, liquid blending equipment, feed mill layouts. Age 30 to 40, engineering background, heavy emphasis on sales. Interested in high earnings $15,000 per year or better. Travel Monday through Friday. Sober and reliable. Only man possessing above qualifications and presently successful need apply. Address Ad No. 5199, Feedstuffs, Minneapolis 40, Minn.

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Feed & Grain Handling & Processing Equipment

NEW & USED

Scales, Hammermills, Feed Mixers, Sewing Machines, Elevators, Pellet Mills, and Grain Cleaners

E. H. Beer & Co., Inc. Ibsen Ave. & Newkirk St. Balto. 24, Md.

HELP WANTED

SALESMAN TO CALL DIRECTLY ON farmers to sell aluminum gate on commission and incentive basis. Contact: Pioneer Industries, Sioux City, Iowa.

SERVICE MAN FOR KANSAS CITY, MO.— Will travel Midwest area. Write stating qualifications, age and salary expected. Address replies, W. G. Trapp, California Pellet Mill Co., 1114 East Wabash Ave., Crawfordsville, Ind.

EDITORIALLY TRAINED MAN WITH working knowledge of country grain elevators for position on trade paper. Give all qualifications, experience, education, family, references, salary, etc. Write Ad No. 5170, Feedstuffs, 2832 Board of Trade Bldg., Chicago 4, Ill.

FEED SALESMAN—YOUNG, AGGRESSIVE, program minded farm supply salesman wanted for established central Iowa territory. Must be self-starter. Excellent future with one of the Midwest leading feed companies. Reply Box No. 5220, Feedstuffs, Minneapolis 40, Minn.

SALESMAN — NATIONAL FEED MANUfacturer seeking salesman experienced in agricultural field for work in Michigan territory. This is an opportunity to establish a satisfying career in a growing industry. Write with qualifications to W. G. Stokes, District Sales Manager, 12730 Beck Road, Plymouth, Mich.

FEED MILL SUPERINTENDENT — MEdium-sized, growing AAA-1 Midwest manufacturer needs man experienced in directing working force for most effective manpower utilization. Write giving complete background and qualifications. Address Ad No. 5173, Feedstuffs, Minneapolis 40, Minn.

DISTRICT SALES MANAGERS-SALESMEN —Manufacturer animal health products, antibiotic vitamin mineral supplements. Territories open Indiana, Illinois, Iowa, Wisconsin, Michigan, Pennsylvania, New York, other states. Expenses, salary, commission. Give details, experience, references. Address Ad No. 4610, Feedstuffs, Minneapolis 40, Minn.

MANUFACTURER'S REPRESENTATIVE — Well known manufacturer has opening for man now calling on feed dealers to sell special fast selling product to dealers, good commission, payable monthly, full credit on repeat business, excellent sales promotion program. For details give territory now covering and how often. All replies confidential. Write R. F. Davis, Box 5020, Minneapolis 6, Minn.

REPRESENTATIVES WHO ARE SEEKing better than average incomes. Not afraid of long hours, hard work (not physical), believe they have the ability to meet and discuss the feed business with top echelon personnel and are willing to call upon the smaller feed mills as well. We are one of the leaders in our field and are noted for paying the highest commission rates in the industry. Age is no barrier but a prime requisite is a working knowledge of the feed industry and the feed mills of your state. Nutritional experience is beneficial but not necessary. Most states of the East, Southeast, South, Southwest, West and Middle West are available for representation. Men and women not now a representative but who desire a change will be given consideration. Please send all replies containing experience and a list of the principals you are now representing to Ad No. 5204, Feedstuffs, 2832 Board of Trade Bldg., Chicago 4, Ill.

MANAGER FOR CENTRAL OHIO ELEVATOR AND FEED STORE

Excellent facilities for grinding, mixing and grain handling.

Very good opportunity for an aggressive individual experienced in merchandising feed and grain.

Reply to John W. Eshelman & Sons P. O. Box 380, Circleville, Ohio

FEED ADVERTISING

Assistant ad manager position with nationally distributed feed company. Open to man with feed advertising experience and ability to write compelling copy to dairy, beef, poultry farmers. Age 25-35. Send complete resume and samples of writing to Ad No. 5200, Feedstuffs, Minneapolis 40, Minn.

MISCELLANEOUS

USED MOISTURE TESTERS—Don't pay a fancy price for a new tester when we can sell you an excellent factory reconditioned instrument. All popular makes available. Prices start at $125. Send for FREE CATALOG on grain and seed testing and handling equipment. Burrows Equipment Co., 1316 Sherman Ave., Evanston, Ill.

To Discuss Additives At Convention of Ingredients Group

DES MOINES — Feed additives — both their values in feeds and government regulations of their use — will come in for attention at the annual convention of the National Feed Ingredients Assn., to be held Oct. 1-2 at the Congress Hotel in Chicago.

According to program plans announced by Peter W. Janss, association executive secretary, Des Moines, the morning session Thursday, Oct. 1, will include a talk by Dr. Charles H. Durbin, veterinary medical director, Food and Drug Administration, Washington, on "1959 Requirements for Clearing Feed Additives."

Also scheduled is a talk, "Critique of Feed Additives," by Dr. W. M. Beeson, Purdue University animal scientist.

Another talk at the first session will be on "Some Aspects of Fluorosis in Livestock and Poultry"; the speaker will be Dr. P. V. Christofferson, Columbia Steel Division, U.S. Steel Corp., Provo, Utah.

The morning session will open with greetings from the association president, John Westberg, International Minerals & Chemical Corp., Skokie, Ill.

After a noon luncheon, the program on Oct. 1 calls for section meetings in the afternoon for feed producers, micro-nutrients, mineral producers and allied producers.

There also will be a scientific advisory committee meeting, with talks on "Mechanism of Taste in Animals," by Dr. Ralph Kitchell, University of Minnesota, and "Possible Uses of Chelates in Animal Nutrition," by Dr. Ed Huertl, Dow Chemical Co., Midland, Mich.

A general business meeting is scheduled for the morning of Friday, Oct. 2. This will include reports from the president and the various sections, plus action on recommendations of the board of directors and election of officers. Mr. Janss said this session determines the character and future of the association.

Peavey Announces New Dealer Plan

MINNEAPOLIS, MINN. — A program for "Dealers with a Future" to increase feeder profits through better feeds and service this fall and winter was announced recently by Peavey Feed Mills, Minneapolis.

The plan includes a series of tested service and merchandising elements such as dealer service education, feeder meetings, in-store and on-the-farm livestock exhibits, production record-keeping, service to bulk feeders and sound credit practices.

Dealers earn growth and bonus points with feeder production records, farm service, better merchandising and live exhibits demonstrating the products they sell.

Several hundred dealers from six Upper Midwest states have been entered into this program to achieve these goals, said a Peavey official. As a bonus in the "Dealers with a Future" program, the top six dealers who exceed their bonus point quota by the largest percentage will be guests of Peavey Feed Mills for a week's holiday at a southern Arizona ranch next January.

25 Awarded Certificates on Completion Of Texas Feed Microscopy Short Course

COLLEGE STATION, TEXAS—The third annual Feed Microscopy Short Course held here recently on the campus of Texas A&M College provided the 25 persons in attendance with instruction in the use of microscopes to identify plant and animal tissue structure.

A new phase of the school dealt with determining amounts of various materials in a feed, using a microscopic factor system developed by E. E. Brown, microscopist for the Texas Agricultural Experiment Station and director of the short course. Twelve advanced students were enrolled in the new section of the short course.

Assisting Mr. Brown in conducting the short course were: Louis Barefield, head, department of microscopy, Arkansas state plant board, Little Rock, Ark., and G. M. Barnhart, microscopist and chief chemist, Missouri State Department of Agriculture, Jefferson City, Mo.

Only a few speakers were invited to address the short course students. Most of the instruction time was devoted to actual laboratory practice in using the microscope.

Dr. G. M. Watkins, dean, school of agriculture, welcomed the group, and in his address pointed out his own interest in the science of microscopy. At the conclusion of the short course Dr. Watkins presented each student with a certificate of attendance.

Louis Barefield, president, American Association of Feed Microscopists, gave details relative to the development and organization of the national association and explained several advantages to be gained by obtaining membership in the group and attending the annual meetings.

Fred C. Heck, instructor, department of veterinary research, and formerly associated with Mr. Brown in the state chemist office, discussed some of the obstacles and difficulties encountered by the beginner in feed microscopy.

Dr. Raymond Reiser, professor, department of biochemistry and nutrition, discussed "Definitions and Standards for Fats in Feeds." Dr. Reiser explained some points of difficulty experienced by regulatory services in their attempt to set up standards and adapt adequate definitions for these products.

"There has been a great deal of misunderstanding with respect to standards for commercial feeds and their ingredients," Dr. Reiser commented. "Efforts have been made to incorporate feeding quality in these standards. It is my feeling that this effort unnecessarily complicates the writing of standards because the matter of feeding quality should be the choice of the buyer. As long as a man knows what he is buying, it is up to him to know whether or not it has nutritional value."

Dr. Reiser continued, "Fats are a very complex group of compounds . . . a classification of these compounds is extremely difficult, since there is no clear-cut chemical classification. I must point out, therefore, that our present classification for purposes of feed control is purely arbitrary, and one which we may find necessary to change in the future."

He noted that before the Texas Feed Control Service adopted definitions and standards for fats and oils in feeds, the Texas group decided to see what action the Association of American Feed Control Officials took regarding the same definitions and standards. In 1958, he said, AAFCO adopted a tentative group of definitions and standards based on the suggestions of the Texas Feed Control Service, but with "some very definite differences." These differences, as explained by Dr. Reiser, are as follows:

"First, they (AAFCO) subdivided the fats and oils into animal fats and vegetable fats. They did not include a limit on the amount of moisture, reduced the lower limit of the total fatty acids and removed the requirement that the name of the origin of the fat or animal be given. Perhaps the most important change was the addition of a new group of fats which they called 'fat products feed grade'."

Dr. Reiser said the Texas group has no "real objection" to having both animal fat and plant fat categories, nor to modification in the levels of total fatty acids or unsaponifiable matter. And, he said, the Texas Feed Control Service is "amenable to argument on the question of placing a limit on the H_2O."

However, there are two changes which have drawn strong objection from the Texas group, according to Dr. Reiser. One of these, he said, is the removal of the requirement of the origin of the fat.

"Some commercial people claim that it is impossible for them to know the origin of the fat," Dr. Reiser related. "We feel that they are making an issue over this point since, actually, they do know the origin of their fat, with some rather rare exceptions."

The strongest objection of the Texas group regarding the AAFCO standards, according to Dr. Reiser, is against the use of the classification "fat product feed grade."

Dr. Reiser said the objection is that AAFCO defines the classification as "any fat product which does not meet the definition of other grades" and says "it should be sold on its individual specifications."

"It is our contention that once this category is accepted, there is no need for any other category," he remarked. "Therefore, all fats should be sold on their individual specifications."

Another factor involved in the regulation of fat products, which Dr. Reiser mentioned, is the addition of anti-oxidants for stability. "Fats do

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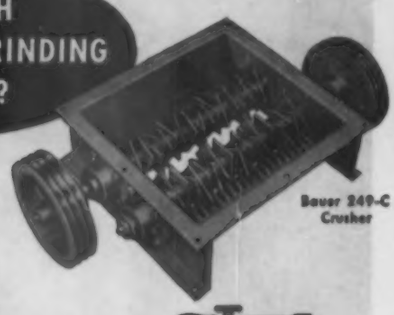

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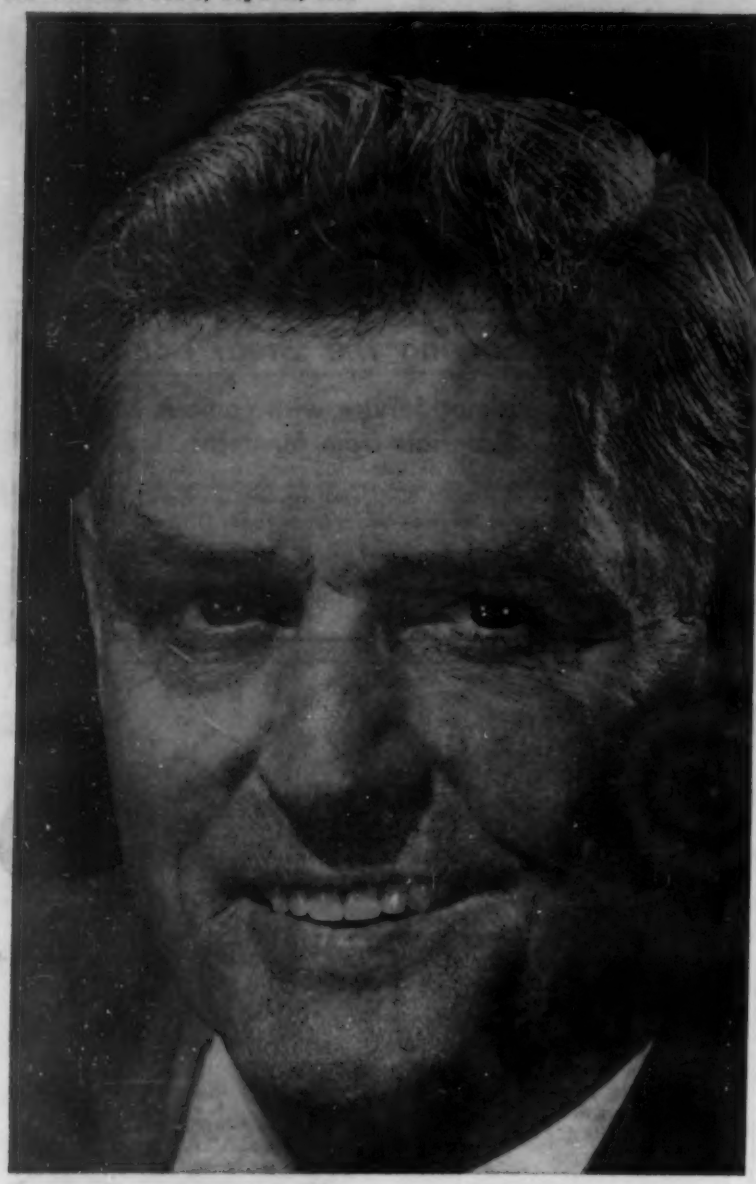

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get rancid, and rancid fats are not desirable," he said. "Therefore, the addition of an anti-oxidant to prevent rancidity is desirable. But, it is difficult, if not impossible, for one to guarantee a degree of stability. Furthermore, there is no satisfactory method for determining the stability of free fatty acids."

Texas regulations, therefore, he said, stipulate that "one can add an antioxidant and say so, but if one makes any statement with respect to stability, he has to prove it." He added, "It is quite obvious that no one will attempt to do so."

Reed McDonald, director, Texas Feed Control Service, explained several sections of the Texas Feed Law and further stressed the importance of feed microscopy as an aid to enforcement of the law.

"Only the feed microscopist who is competent and who has made a study of the composition of a feed product has any idea as to what it may contain," Mr. McDonald said. "There is an urgent need for more trained microscopists. I do know how lucrative this field is from the standpoint of personal income. I do know that your services are needed and they are most valuable and helpful to those of us in feed control work. I know, too, that you are needed by commercial feed manufacturing organizations.

"I do strongly urge you to take every advantage of this opportunity to further your knowledge in this highly respected and most appreciated field of work. The feed industry and the feed control services of the various states are going to depend upon you more strongly as time goes on."

Dean L. Mingus, microscopist and chief chemist, Burrus Feed Mills, Ft. Worth, Texas, talked on the subject of "Microscopy and Its Relation to Quality Control in the Feed Mill." He pointed out several uses of microscopy other than for judging purity and quality of ingredients. One of the uses he mentioned was for the detection of bridging or caking of ingredients within the elevators.

He said the microscope is used in the Burrus mills to examine all formula feeds to insure uniformity and general appearance to find out if an ingredient has been partially or completely omitted.

"Competitive products are quite often studied under the microscope," he said. "This examination helps the Burrus organization to keep abreast of all new developments and to determine if a competitive brand is superior to ours."

Mr. Mingus reported that Burrus Feed Mills often uses qualitative microscopic examination to help determine cost factors. He noted also that the microscope is an asset to the company's sales department. "It always impresses prospective and established dealers to know that Burrus Mills goes to such great lengths to insure the correct manufacture of Texo Feeds."

F. D. Brock, former director of Texas Feed Control Service, chose the subject "Regulatory Services" for his banquet address.

Honeggers' & Co. Tour Manager Is Appointed

FAIRBURY, ILL.—The appointment of Ross E. Hildreth as tour manager at Honeggers' & Co., was announced by the firm recently.

R. E. Hildreth

Mr. Hildreth joined Honeggers in 1956 and was appointed manager of the farm service store at Forrest, Ill., that same year.

Mr. Hildreth will be in charge of tours which are made almost daily by students, farmers, dealers, industry figures and foreign delegations which come to see Honeggers' 600-acre research farm, chick hatchery, feed mill and laboratory.

PATENT GRANTED—James G. Bryant, co-owner and manager, Bryant Engineering Co., Port Huron, Mich., has been granted U.S. patent 2898921 on a "corn sheller having an aspirator conduit." The patent covers the cleaning design of Bryant corn shellers, including the Bryant No. 40 corn sheller model shown above.

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In addition, the W-C Weigher-Feeder is designed to handle such instrument-controlled functions as flow totalizing, recording, programming, and material proportioning. Units are also available for installation on existing conveyors.

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Chicago: Feed $38, meal $56.
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PELLETING

(Continued from page 1)

pelleting roughage and complete rations for a good long while, but the continuing stream of research reports on pelleting plus wider availability of equipment adapted or designed for this purpose are said to be contributing to the continuing growth of interest in this development.

Widespread Interest

Pellet mill manufacturers say that there is interest in roughage and complete ration pelleting all across the country but that some of the most extensive developments have been a continuing increase in the Far West, plus greatly stepped up interest in the Southeast and in some cases the Southwest. Pelleting of Coastal Bermuda grass is a particularly hot item in the South. Also, there have been more new or adapted roughage pelleting installations in the Midwest, especially among custom mill operators, alfalfa dehydrators and new firms set up for this purpose.

In general, most of the interest and activity has been shown by larger feeders and feedlot operators. However, one observer mentioned that feed men now are showing more interest as they seek to gain or retain milling and pelleting that might otherwise be done by feeders themselves.

For the most part, there now seem to be no production problems which cannot be overcome, if people are willing to change or install new facilities to handle this type of work. However, the investment that may be required is, of course, a restraining influence.

Wafering, Too

In addition to pelleting, there also have been developments in wafering. There are now a number of wafering installations using the Foragizer unit, and further developments in this field are expected. Some persons claim nutritional advantages for wafers, using coarsely chopped material, as compared with the more finely ground material in pellets. Meanwhile, conventional pelleting still is the most widespread.

Most of the pelleting of roughage and complete rations is done on conventional pellet mills in stationary installations. However, some people also have reported development of portable units which will go to farms and ranches and grind, mix and pellet roughage and complete feeds. There has been little, if any, pelleting by portable units that move right through a field, although some persons expect that such equipment eventually will be developed.

To obtain a broad picture of how the roughage and complete ration pelleting thing is moving along, representatives of several pellet mill manufacturers were contacted this week. Those who were reached included: Roy Robinson, California Pellet Mill Co.; Robert Dodd, Daffin Mfg. Co.; C. E. Reuther, Helm Mfg. Co.; Robert Stroup, Sprout, Waldron & Co., and Oak Smith, Wenger Mixer Mfg. Co.

Observations

Here are some of the random observations that were made by the several sources:

—"This thing has been developing rapidly in places where people have the facilities to pellet hay. Within the feed industry, most of it has been done on a custom basis by smaller mills. Many older mills are not well set up to handle this type of work, and the larger plants, for various reasons, are not yet so interested. Interest to date has been mostly among feeders or feedlot operators themselves, but a good many custom mills are now pelleting hay and complete rations."

—"Most of the interest has been in the West, but there has been a rash of greater interest in the Southeast and Southwest, particularly on Coastal Bermuda grass."

—"Pelleting upgrades poorer quality roughage more than it does better quality material, and much interest has been shown in pelleting lower grade grasses."

—"Most operators are pelleting complete rations for cattle and sheep, but there is a good deal of work on straight hay, too. Nutritionally, the value of pelleting hay is pretty well accepted. There are still some questions on concentrate-roughage ratios in complete rations. Also, acceptance of these rations for beef cattle and sheep is quite widespread, but some people still have questions on dairy rations."

—"A restraining influence in the feed industry is the requirement for the storage and handling facilities as well as the pelleting equipment. For one thing, live-bottom bins delivering to the hopper scale are desirable to handle this type of material."

Custom Mills

—"Frequently the pellets can be made in custom mills from hay in 'hay banks' and then hauled out in bulk and put into self-feeders. This type of operation works well for smaller farmers, too."

—"Any modern pellet mill will pellet these rations. There are advantages to having a high-speed mixer. Usually molasses is used. A high-speed drive on the die also is suggested. The hay used may be fairly wet, and adequate drying capacity is often important."

—"So far as the feed industry is concerned, most of the pelleting so far has been done in custom or smaller specialized mills."

(Also, some larger firms have been getting into this or have been showing more interest. In some cases, fibrous materials other than hay are used in "complete" rations.)

—"Some people start out pelleting just hay but usually get into complete rations, including the hay."

—"There has been a great deal of interest in pelleting Coastal Bermuda and other grasses in the South. Production of some small Coastal Bermuda pellets for wintering rations, and then complete rations, too, has worked out very well. In the Pacific Northwest, an interesting development is making hay from unripe barley and oats and then grinding and pelleting this, with the grain content adding to the energy value. Combining material like this with alfalfa has doubled capacity as compared with alfalfa alone."

Dairy Cows, Too

—"Some people are feeding complete pelleted rations to milk cows, in spite of reports about lower butterfat percentage. They figure that they get greater milk production, and perhaps even greater total butterfat output, and are more concerned about the economics than the reported nutritional effects."

—"In pelleting roughage and complete rations as well as other types of feed, use of steam gives the best results and produces a better pellet. With dry hay, moisture is sometimes added at the hammermill. Also, there is a patented process for adding moisture at the die face if more moisture than is available from the steam is advisable."

—"One factor against portable pelleting in the field is the problem that may be encountered in dirt, sand, grit, etc., in the material."

—"Most commercial feed companies have not yet shown much activity in this field, but custom operations are increasing. Things like special bin design and adequate processing and pelleting facilities deter activity some."

Moisture, Granulation

—"Developments in this pelleting field have been moving both sanely and insanely, but quite a few installations by dehydrators, feedlot operators and others are very successful. There are no particular problems if moisture and granulation are right. We advise that if moisture in hay is under 15%, there usually is no difficulty. Granulation varies from fine to relatively coarse, but some pellets are not 'good' if the material is too coarse. For a good, hard pellet, a ¼" or finer grind is desirable. If there is a fair amount of ground grain in the ration, the roughage can be more coarse."

—"Many farmers are still interested in pelleting themselves, but more of them are realistic about the investment and size of operation required. Frequently, feeders or ranchers get together and put in plants on a joint basis. There seems to be quite a bit of opportunity for feed mills here if they can do this job efficiently for feeders."

Have to Dehydrate

—"In some southern areas, it is necessary to dehydrate the grasses before grinding and pelleting. Moisture will not get down low enough any other way."

—"There are some new portable units which go to farms and grind, mix and pellet, not using steam. They generally add molasses, which aids in the pelleting."

—"In some cases, mills are sending out straight hay pellets, and then the pellets are mixed with corn pellets or other concentrate in mixer-wagons at the feedlot."

—"We have seen more interest in this development in the past six or eight months than ever before. Many feeders and ranchers are getting into it, often with a number of them doing it on a joint basis. Some feed people, too, are showing more interest."

—"Equipment is now available for handling, processing and pelleting so that operations can be efficient all the way from the field through the mill to the feedlot, but the financial angles in mill revisions and storage and handling of materials slows interest some."

—"One southern operator, commenting on the changing scene and not so relaxed approach, said, 'We've cut down the magnolia trees, thrown away the mint for mint juleps. Now we're drinking bourbon and water and really going places in pelleting and feeding'."

Cost Analysis

—"We have taken figures on feed conversion from some nutrition experiments with hay and complete rations and shown how gains in feed efficiency alone from pelleting will pay for all costs in the pellet plant installation with certain numbers of steers. For example, in one comparison on hay, it was shown that gains in just feed efficiency, with no consideration for labor and other savings, would pay for an installation if only 245 steers were to be fed. In another case, with high roughage-low concentrate complete rations, the break-even point on this basis was 845 steers, and the operator planned to feed more than 1,000, so things looked good for him."

—"If a feedlot is to have a pelleting installation, it appears that it should have 500 to 1,000 or more cattle."

—"As has been frequently pointed out, most of the value in pelleting seems to be in higher roughage rations."

Not New

—"Pelleting of coarsely ground roughage pellets has been done successfully for years. Part of the recent reawakening of interest may be due to the fact that more makes of pellet mills will now do this type of work."

—"Pelleting equipment must be well built and substantial, which increases initial cost of equipment. Until some way is found to revise equipment and lower the cost, relatively small installations for the farm are some way off. However, there no doubt will be continuing developments in this field."

—"Interest in in-the-field pelleting seems to have decreased recently as people saw the various problems involved."

TOP OF THE HOPPER

(Continued from page 2)

As a USDA economist noted, many cereals are sufficiently different from other cereals to justify considerable advertising, while one produce firm's eggs are so similar to those of another that these private firms haven't done much egg advertising. However, although unprocessed eggs may never have the romantic appeal of a "breakfast food shot from guns," someone may yet come up with promotion programs on eggs that offer more competition for cereal products.

MANY MANUFACTURING COMPANIES need to make a more realistic determination of total production costs and price their products accordingly, according to a banker's advice. The Millers National Federation, national association of flour millers, quotes a Chicago banker as saying that a good many companies will be severely pinched in a few years unless they start pricing products and services to reflect rising costs of replacing their facilities. The banker, William G. Olson of the Continental-Illinois National Bank & Trust Co., says that behind a "continuing dilation of this country's corporate financial strength" are unrealistic depreciation charges on plant and equipment.

He says that companies are spending more on plant and equipment than they are taking in earnings after dividends. In the last decade, corporations, excluding banks and insurance companies, have rolled up expenditures $14 billion greater than those earnings. "Of the total $294 billion flow of new funds into corporations during those 10 years, $223 billion came from cash earnings after dividends and $71 billion were net proceeds from outside financing," Mr. Olson noted. At the same time, new facilities took an expenditure of $237 billion, and only $51 billion was added to working capital.

Mr. Olson called for a more realistic determination of current production costs. Too many firms, he warned, ignore the fact that equipment now being depreciated probably will never be replaced for what it cost originally.

THERE IS A GOOD DEAL OF SPECULATION these days on the hog price picture in the months and year ahead. According to a bulletin from The Corn Belt Farm Dailies, some experienced hog market observers are convinced that fall and winter hog prices this year will hold up surprisingly well —which is pretty good news for the feed industry.

Pork demand, say these observers, is strong, or prices could not have held up as well as they have during the big summer hog kill. And cooler fall weather should increase appetites for pork. Another good omen is the improved distribution of this year's pig crop; a far greater share of it has been marketed and slaughtered during the summer than ever before, and this should reduce the pressure traditionally brought to bear on mid-fall and early winter markets. Hog raisers, it seems, are realizing more and more the value of spreading out farrowings.

Boston: Demand fair; supply adequate; light $56, dark $57.

Los Angeles: Demand slow; trend unchanged; supply adequate; $6.10 cwt., car-

Ogden: Supply normal; $1@1.25 per bale; $20 ton in the field.

MALT SPROUTS

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

A AND D FEEDING OIL

Minneapolis: Demand fair; supply ample; 10,000 A 34½¢ lb.; 300 D, 2,250 A 19¢ lb.; 300 D, 1,500 A 17½¢ lb.; 300 D, 750 A 16¢ lb.

Chicago: Demand fair; trend steady; supply ample; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7½¢ a million units of vitamin A, l.c.l., packed in 55-gal. drums, f.o.b. Chicago, drums included.

Boston: Demand and supply steady; 400 D, 1,500 A 17½¢ lb.; 400 D, 3,000 A 20¢; 300 D, 3,000 A 19½¢; 300 D, 2,250 A 18¢; 300 D, 1,500 A 16½¢; 300 D, 750 A 14¾¢; 75 D, 750 A 14¾¢.

Denver: Demand fair; trend steady; supply ample; 2,250 A, 300 D 22¢ lb., f.o.b. Denver.

New York: Demand and supply good; trend firm; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢, 2,250 A 17½@20¢, 3,000 A 19@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢; f.o.b. Massachusetts, New York or Pennsylvania.

ALFALFA MEAL

Boston: Demand slow; supply ample; dehydrated, 17% $57.50; suncured, 13% $46.50, nominal.

Los Angeles: Demand steady; trend firmer; supply limited; dehydrated meal, 17% protein, 100,000 A $51@52, bulk; dehydrated pellet meal, 17% protein, 100,000 A $53@54, bulk; suncured meal, 15% protein $46@46, bulk; suncured crumbles, 15% protein $47@48, bulk.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $59.50@60.50.

Philadelphia: Demand and supply fair; 17% dehydrated $62.50.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $55.

St. Louis: Demand fair; trend firm; supply limited; suncured, 13% fine $45; dehydrated, 17%, 100,000 A, demand fair, trend steady, supply ample $52.

Chicago: Demand slow; trend easier; supply ample; carlots, 17% dehydrated, with 100,000 units vitamin A guaranteed $52.50@53.50.

Portland: Demand fair; supply ample; trend unchanged; suncured, 14% $42; dehydrated $44.40.

New Orleans: Demand steady; trend firm; supply adequate; vitamin A, 17% $58@59; pellets $53@54.

Seattle: Demand fair; trend steady; supply good; 15% protein suncured $45, delivered, truck loads; 136,000 A unit dehydrated $48, delivered, truck loads.

Kansas City: Demand slow from mixers; offerings tightening up as a result of dry hot weather and late season; prices very firm with indications of upward trend; dehydrated alfalfa meal with 17% protein and 100,000 units of vitamin A guaranteed on arrival: regular meal $45@46 sacked, reground pellets $47 sacked, pellets $42 bulk; dehydrated alfalfa with 18% protein and 125,000 A $50 sacked; meal with 20% protein and 150,000 A $57 sacked; suncured alfalfa meal demand slightly improved, offerings light and prices firm, No. 1 fine ground $40.50@41, No. 1 ¼-in. $39, No. 2 ¼-in. $36.50@36, sacked.

Denver: Demand good; trend strong; supply ample; dehydrated $48, Denver.

Omaha: Demand fair; trend strong; supply tight; 17% dehydrated, 100,000 A units, bulk pellets $42; sacked meal $47, Omaha basis.

Buffalo: Demand poor; trend steady; supply adequate; $61.50, Boston.

Minneapolis: Demand good; supply adequate; trend steady; 17% dehydrated, 100,000 units vitamin A, reground pellets $48, bulk, Minneapolis; oiled reground pellets $50, bulk; sacks $4 more.

ANIMAL FAT (STABILIZED)

New Orleans: Demand fair; trend steady; supply adequate; 6@6½¢ lb., tank cars.

Boston: Demand fair; supply ample; tallow 6¾¢ lb.; yellow grease 5¾¢ lb.

Ogden: Supply average; 6¢ lb.

Chicago: Demand better; trend steady; supply fair; carlots, truck or ton lots, bleachable fancy tallow $6.75 cwt.; yelow grease $6.37½ cwt.

San Francisco: Demand fair; supply ample; bleachable fancy 6¼¢ lb.; yellow grease 5¼¢ lb.

Ft. Worth: Demand fair; supply ample; prime tallow, tank cars 6¢ lb.; drums 8¼¢ lb.; f.o.b. north Texas packing plants with returnable drums.

Atlanta: Demand good; trend steady; supply ample; 5¾¢ lb. in bulk, f.o.b. Alabama and Georgia producing plants.

Kansas City: Demand slow from mixers; trend steady to easier; supply ample; prime tallow 6¢ lb., tank cars.

Louisville: Demand slow; trend steady; supply good; bleachable white 6¢ lb.; white tallow 6¼¢ lb.; yellow grease 5¾¢ lb.

St. Paul: Demand very good; supply ample; trend firm; bleachable fancy tallow 6¾¢ lb., f.o.b. producer's plant.

BARLEY FEED

Philadelphia: Demand slow; supply fair; $46.50.

Ogden: Supply average; rolled $46@51; whole barley $38@43.

Portland: Demand good; supply ample; trend unchanged; rolled $56; ground $54.

Los Angeles: Demand slow; trend weak; supply ample; standard rolled $3 cwt.; standard ground $3 cwt.

Baltimore: Demand fair; trend steady; supply ample; carlots $46.50.

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occured. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

Chicago: Demand quiet; trend steady; supply adequate; carlots $35.

Boston: Demand slow; supply adequate; domestic $41; Canadian $43.

New Orleans: Demand slow; trend unchanged; supply ample; $52@53.

San Francisco: Demand fair; supply ample; rolled $59.75; ground $59.25.

Denver: Demand good; trend steady; supply adequate; $1.80 cwt.

Seattle: Demand and supply good; trend firm; $46, bulk, truck loads.

Milwaukee: Demand good; supply fair; needles $7@$1.05 cwt.; ground screenings $25.

BENTONITE (SODIUM)

Chicago: Demand fair; trend steady; supply ample; f.o.b. Wyoming and South Dakota shipping points: granular, 20 mesh $16.50; fine granular, 80 to 100 mesh $13.75; powder, 200 mesh $13.50, f.o.b. Belle Fourche, S. D., minimum 30-ton carlots, 80 granular $13.50 net; 200 mesh, fine $13.25 net.

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $31.50; 200 mesh fine $31.

Denver: Demand fair; trend good; supply ample; $21.

BLOOD FLOUR

Louisville: Demand slow; trend steady; supply good; $80@85.

BLOOD MEAL

Chicago: Demand fair; trend steady; supply ample; guaranteed 80% protein, carlots, 100-lb. bags $120.

Portland: Demand fair; supply ample; trend unchanged; $115.

Ogden: Supply nominal, Swift & Co. workers on strike; $92.50, in 100-lb. bags, f.o.b. Ogden.

New Orleans: Demand slow; trend unchanged; supply normal; $80@85.

San Francisco: Demand fair; supply ample; $6 a unit of ammonia.

Los Angeles: Demand good; trend easier; supply adequate; $5.50 a unit of ammonia.

Omaha: Demand and trend firm; supply ample; $100, Omaha basis.

Louisville: Demand slow; trend firm; supply good; $80@85.

BONE MEAL (STEAMED)

New Orleans: Demand fair; trend easy; supply ample; $80@85.

Boston: Demand and supply steady; $100.

Portland: Demand fair; supply ample; trend unchanged; $102.

Chicago: Demand and supply fair; trend steady; carlots, 100-lb. bags $97.50.

Cincinnati: Demand fair; trend steady; supply fair; $100, Cincinnati.

Los Angeles: Demand fair; trend unchanged; supply adequate; imported $78, in 20-ton lots.

San Francisco: Demand good; supply ample; $75.

Ft. Worth: Demand good; supply light; $90, f.o.b. Ft. Worth, local manufacture.

Denver: Demand fair; trend firm; supply ample; $105.70, Denver.

Seattle: Demand good; trend firm; supply limited; $90, delivered, truck lots.

Buffalo: Demand good; trend steady; supply limited; $105.

Louisville: Demand dull; trend steady; supply light; $80@85.

BREWERS DRIED GRAINS

Philadelphia: Demand and supply fair; $51.50.

Chicago: Demand quiet; trend easier; supply ample; carlots, 26% protein $42.50.

St. Louis: Demand good; trend steady; supply adequate; $42.

Cincinnati: Demand poor; trend steady; supply adequate; $47.

Los Angeles: Demand slow; trend unchanged; supply adequate; $49.50 bulk, $53.50 sacked.

Boston: Demand slow; supply ample; last half September $52; 22% $49.50.

New Orleans: Demand fair; trend easy; supply ample; $60@65.

San Francisco: Demand fair; supply ample; $54.

Ft. Worth: Demand slow; supply sufficient; 26% protein $50@51, September, delivered Ft. Worth.

Louisville: Demand fair; trend firm; supply ample; $46.

Buffalo: Demand poor; trend steady to lower; supply fair; $41.50, bulk, Boston.

Milwaukee: Demand good; supply fair; $43.50.

BREWERS DRIED YEAST

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Boston: Demand and supply steady; 11¢ lb.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Chicago: Demand quiet; trend steady; supply ample; carlots 9½@10½¢ lb.; l.c.l. 9¾@12¾¢ lb.

Milwaukee: Demand quiet; trend steady; supply adequate; 10@11¢ lb., carlots; 10½@12¾¢ lb., l.c.l.

St. Louis: Demand quiet; trend steady; supply fair; 9½@10¢ lb., carlots; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Los Angeles: Demand slow; trend unchanged; supply adequate; 10¢ lb. in 5-ton lots; 11¢ lb. in 1-ton lots; 12¢ lb. in less than ton lots.

San Francisco: Demand fair; supply good; 10¢ lb.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

Denver: Demand light; trend steady; supply ample; 8¢ lb., f.o.b. Golden, Colo.

Buffalo: Demand good; trend steady; supply ample; $9.65 cwt.

Omaha: 10½¢ lb.

Louisville: Demand slow; trend firm; supply good; $10@10.50 cwt.

BUTTERMILK-CONDENSED

Philadelphia: Demand and supply fair; $4.25 cwt.

Ogden: Supply normal; $4.40, 100-lb. drum.

Boston: Demand quiet; supply tight; 3¾¢ lb., nominal.

Chicago: Demand fair; trend steady; supply ample; carlots $3.25@3.50 cwt.

Los Angeles: Demand slow; trend steady; supply adequate; 5½¢ lb. in 100-lb. lots; 4¾¢ lb. in 500-lb. lots.

New Orleans: Demand slow; trend unchanged; supply adequate; $4.25@4.30 cwt.

San Francisco: Demand fair; supply good; $5 cwt.

Louisville: Demand very dull; supply nil; trend steady; $4.25 cwt., nominal.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight)

New York: Crystals $15.28, flour $10.28.
Buffalo: Crystals $16.11, flour $11.11.
Toledo: Crystals $17.96, flour $12.96.
Boston: Crystals $16.53, flour $11.63.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CALCIUM CARBONATE

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100-lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Cincinnati: Demand fair; trend steady; supply adequate; $8@9 cwt.

Minneapolis: Fine grind, 50-lb. bags $12.25, 100-lb. bags $11.50; bulk, boxcar $10; bulk hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

Los Angeles: Demand slow; trend unchanged; supply adequate; flour $10.15, 20-ton cars; meal $11.15, 20-ton cars.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

CHARCOAL

Los Angeles: Demand slow; trend unchanged; supply ample; hardwood poultry: $156 in less than ton lots; $144.40 in ton lots.

Boston: Demand and supply steady; $110.

Chicago: Demand fair; trend steady; supply ample; carlots $110.

San Francisco: Demand steady; supply ample; $141.

COCONUT OIL MEAL

Los Angeles: Demand slow; trend unchanged; supply adequate; copra cake $75, bulk.

Portland: Demand good; trend higher; supply limited; $71.

San Francisco: Demand good; supply tight; solvent $69.

Seattle: Demand fair; trend firm; supply ample; $82, delivered, truck (California).

COD LIVER OIL (FORTIFIED)

Boston: Demand and supply steady; 600 D, 2,250 A 19¢ lb.; 600 D, 1,500 A 18¢; 300 D, 3,000 A 20½¢; 300 D, 2,250 A 18½¢; 300 D, 1,500 A 17¢.

New York: Demand and supply good; trend firm; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@15½¢, 1,500 A 18½@20¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 500 ICU, 1,500 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

Boston: Demand and supply steady; 4½¢ lb.

Los Angeles: Demand slow; trend unchanged; supply adequate; 4¢ lb.

New Orleans: Demand light; trend easy; supply normal; $65@70, f.o.b. Gulf.

New York: Demand fair; trend steady; supply tight; 3½@3¾¢ lb., f.o.b. eastern shore.

Denver: Demand fair; trend steady; supply ample; dried $167, Denver.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $44.90, meal $62.90.
Atlanta: Feed $50.98, meal $65.98.
Birmingham: Feed $49.64, meal $67.64.
Boston: Feed $49.84, meal $67.84.
Chicago: Feed $38, meal $56.
Cleveland: Feed $46.14, meal $64.14.
Denver: Feed $48.51, meal $66.51.
Ft. Worth: Feed $46.96, meal $64.96.
Indianapolis: Feed $43.36, meal $61.36.
Kansas City: Feed $38, meal $56.
Louisville: Feed $46.21, meal $63.21.
New Orleans: Feed $48.20, meal $66.20.
New York: Feed $50.43, meal $67.43.
Norfolk: Feed $48.71, meal $66.71.
Philadelphia: Feed $49.02, meal $67.02.
Pittsburgh: Feed $46.96, meal $64.96.
St. Louis: Feed $38, meal $56.
Decatur, Ill.: Feed $31.75, meal $53.75.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $46.50.

Louisville: Demand dull; trend steady; supply normal; $49.45.

COTTONSEED OIL MEAL

Wichita: Demand fair; supply insufficient; 41% old process $69.

Chicago: Demand fair; trend steady to easy; supply ample; carlots, Memphis basis, hydraulic $55, solvent $53.50.

St. Louis: Demand fair; trend lower; supply adequate; solvent $56.50.

Portland: Demand slow; trend lower; supply ample; $76.

Ogden: Supply normal; 41% $30@35.

New Orleans: Demand slow; supply adequate; trend steady; $78@79.

San Francisco: Demand good; supply tight; 41% $74; 44% $77.

Memphis: Demand slow; trend lower; supply plentiful; prime 41% protein, old process $55; new process, 41% solvent $52.

Boston: Demand slow; supply light; $54.

Cincinnati: Demand fair; trend steady; supply adequate; $62.

Los Angeles: Demand good; trend easier; supply ample; $64, bulk, new crop, September-October.

Philadelphia: Demand and supply fair; trend unsettled; $66.

Ft. Worth: Demand increased but hesitant buying; supply sufficient; 41% old process $60; solvent, 1% fat added $59.40; pellets $2 additional; cottonseed hulls $17.

Denver: Demand fair; trend steady; supply ample; 2% fat $65.40, Denver.

Seattle: Demand fair; trend easy; supply ample; $72, delivered, truck (new crop, September delivery).

Kansas City: Demand fair, mostly for deferred shipment; some indication of improved interest from cattle feeders because of deteriorating pastures following weeks of dry, hot weather; production light; old process $55@55.50, Memphis; solvent $52@52.50.

Omaha: Demand slow; trend steady; supply ample; 41% solvent $56.70, bulk, delivered Omaha.

Atlanta: Demand good; trend steady; supply fair; 41% $57, f.o.b. Georgia producing mills.

Buffalo: Demand poor; trend steady to lower; supply fair; $74.25, Boston.

Louisville: Demand slow; trend steady; supply ample; old process $61; new process $60.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL (POWDERED)

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

New York: Demand and supply good; trend firm; price per lb. in 50- and 100-lb. bags, or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

Kansas City: Demand fair; trend steady; supply adequate; 1,500 ICU 9¾¢ lb.; 3,000 ICU 11½¢ lb.

D ACTIVATED PLANT STEROL (POWDERED)

Chicago: Demand fair; supply ample; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 23¢ lb., ton lots and less 30¢ lb.

DEFLUORINATED PHOSPHATE

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $71.50 net ton, f.o.b. Houston, 100-lb. multiwall paper bags, $68.50 in bulk.

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $45 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18%, $69.13 net ton, f.o.b. Wales in 100-lb. multiwall bags, $3 less in bulk.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; carlots $63.50, truck load $64.25, net ton, f.o.b. Coronet in 100-lb. multiwall bags; $60.50 and $57.50 in bulk.

Cincinnati: 18% phosphorus $81; 13% phosphorus $64.98, f.o.b. Cincinnati.

DICALCIUM PHOSPHATE

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $82.25; freight equalized with closest producing point, carload basis.

Texas City, Texas: 18.5% minimum phosphorus, 21% minimum calcium, 24% maximum, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags; bulk, boxcars and hoppers, $3 net ton less than bagged materials.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Portland: Demand slow; supply ample; trend unchanged; $115.

Cincinnati: 18½% phosphorus $92@93.

Denver: Demand fair; trend steady; supply ample; $97.60, delivered in Denver.

DISTILLERS DRIED GRAINS

Cincinnati: Demand poor; trend steady; supply adequate; $49.50.

POTASSIUM IODIDE, U.S.P.

Omaha: Demand and trend firm; supply

Boston: Demand fair; supply adequate; light $56, dark $57.
Philadelphia: Demand slow; trend unsettled; supply light; $58.
San Francisco: Demand fair; supply ample; solubles $85.
Buffalo: Demand poor; trend steady; supply fair; $52, bulk, Boston.
Seattle: Demand good; trend firm; supply limited; $63.50, delivered, truck lots.
Louisville: Demand fair; trend easy; supply light; bourbon grains: light $46@47, dark $49, solubles $77.

DRIED BEET PULP

Ogden: Supply average; $44.48.
San Francisco: Demand good; supply fair; $42.80, bulk.
Boston: Demand quiet; supply spotty; $51.
Los Angeles: Demand slow; trend unchanged; supply ample; $47.80@48.80.
Portland: Demand good; supply limited; trend unchanged; $56.40.
New Orleans: Demand fair; trend unchanged; supply adequate; $60@61.
Ft. Worth: Demand slow; supply moderate; carlots, 50-lb. papers $49, October-November-December, delivered Ft. Worth.
Milwaukee: Demand good; supply fair; plain $54; molasses $54.
Seattle: Demand good; trend firm; supply limited; $52, delivered, carlots.
Atlanta: Demand fair; trend steady; none available until Oct. 1; $51.03, delivered.
Buffalo: Demand poor; trend steady; supply adequate; $51, Boston.
Denver: Demand good; trend steady; supply adequate to meet commitments only; $49.23, delivered in Denver.

DRIED BUTTERMILK

Chicago: Demand fair; trend steady; supply adequate; carlots, medium acid $10.60@10.80 cwt.; sweet cream $11@11.25 cwt.
Los Angeles: Demand fair; trend firmer; supply adequate; 12¢ lb.
New Orleans: Demand fair; trend easy; supply normal; $11@11.50 cwt.
Ogden: Supply normal; $8.50, 100-lb. bag.
San Francisco: Demand fair; supply ample; 11½¢ lb.
Louisville: Demand dull; trend steady; supply light; 11@11½¢ lb.
Buffalo: Demand fair; trend steady; supply limited; $11.95 cwt.
Milwaukee: Demand and supply fair; $10.50 cwt.

DRIED CITRUS PULP

Boston: Demand fair; supply adequate; new crop $52.50.
New Orleans: Demand fair; trend easy; supply good; $35@40, f.o.b. Florida points.
Los Angeles: Demand and trend steady; supply not too plentiful; orange pulp $41, bulk; lemon pulp $40, bulk.
San Francisco: Demand and supply fair; meal $49.
Atlanta: Demand fair; trend weak; supply heavy; $32.50, f.o.b. Florida producing plants.
Buffalo: Demand poor; trend steady; supply adequate; $35, f.o.b. Florida points.

DRIED SKIM MILK

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.
Philadelphia: Demand and supply fair; $12.50 cwt.
New Orleans: Demand dull; trend unchanged; supply ample; $11@11.50 cwt.
Portland: Demand good; supply ample; trend unchanged; 13¢ lb.
Chicago: Demand fair; trend higher; supply ample; carlots $10.65@10.85 cwt.
Boston: Demand good; supply tight; 12¢ lb.
Cincinnati: Demand fair; trend steady; supply adequate; 10⅛@10¾¢ lb.
Ogden: Supply normal; $15.15, 100-lb. drum.
San Francisco: Demand and supply fair; 13½¢ lb.
Buffalo: Demand fair; trend steady; supply ample; $10.65 cwt.
Milwaukee: Demand and supply fair; $11 cwt.
Minneapolis: Demand good; supply ample; $10.90@11 cwt.
Louisville: Demand dull; trend steady; supply light; 11@11½¢ lb.

DRIED WHEY

Ogden: Supply average; $6.90, 100-lb. bag.
Los Angeles: Demand slow; trend unchanged; supply adequate; $6.10 cwt., carloads; $6.35 cwt., l.c.l.
Cincinnati: Demand fair; trend steady; supply adequate; $6.15 cwt.
Wichita: Demand light; supply ample; $6.50 cwt.
Portland: Demand good; supply ample; trend unchanged; $6.80 cwt.
Chicago: Demand fair; trend higher; supply ample; carlots, f.o.b. plant $5.50@5.70 cwt.
Boston: Demand and supply steady; 5½¢ lb.
Philadelphia: Demand and supply fair; $6.50 cwt.
New Orleans: Demand good; trend easy; supply ample; $5.50@6 cwt.
San Francisco: Demand steady; supply good; $5.75 cwt.
Ft. Worth: Demand fair; supply adequate; carlots, standard $6, sacked, delivered Ft. Worth; $6.25 ton lots, f.o.b. warehouse, Ft. Worth.
Denver: Demand fair; trend steady; supply ample; $6.50 cwt.
Seattle: Demand and trend steady; supply good; $6.40 cwt., ex-warehouse, l.c.l.
Minneapolis: Demand fair; supply ample; trend steady; 40 mesh $5.65 cwt.; standard $5.50 cwt., producer's plant.
Kansas City: Demand fair; trend steady; supply adequate; regular or partially delactosed $5.50 cwt., producers' points.
Louisville: Demand dull; trend steady; supply light; $6.50 cwt.

FEATHER MEAL (HYDROLYZED)

Los Angeles: Demand fair; trend steady; supply adequate; $1 a unit of protein.
Boston: Demand quiet; supply scarce; $85, nominal.
Ft. Worth: Demand fair; supply moderate; 85% to 87% protein $52.50, f.o.b. trucks, north Texas plants.
Atlanta: Demand good; trend steady; supply ample; $83, f.o.b. Alabama and Georgia producing mills.
Salisbury, Md.: Demand spotty; supply ample; $88, f.o.b., bulk.

FISH MEAL

New Orleans: Demand fair; trend steady; supply good; menhaden, 60% $126@130; scrap $122@126.
Chicago: Demand very slow; trend steady; supply ample; carlots, eastern menhaden $128 and scrap $124; Gulf menhaden $128 and scrap $124; Northeast redfish $130.
San Francisco: Demand slow; supply ample; $2.05 a unit of protein.
Ogden: Supply average; $2.20 a unit, f.o.b. Coast; 65% $176@178.
Portland: Demand slow; supply ample; trend unchanged; $2.05 a unit.
Boston: Demand and supply steady; $130, f.o.b. Gloucester, 60% menhaden.
Los Angeles: Demand slow; trend unchanged; supply limited; local production, 60% protein $2.15 a unit.
Cincinnati: Demand fair; trend steady; supply adequate; $160.
Ft. Worth: Demand good; light offerings menhaden, sufficient on Peruvian; 60% menhaden $139, immediate; 65% Peruvian $137, first half October, delivered Ft. Worth.
Seattle: Demand and supply good; trend steady; $2.10 a unit protein, ex-dock (Alaskan).
Denver: Demand fair; trend steady; supply ample; $2.15 a unit of protein, f.o.b. West Coast.
Milwaukee: Demand good; supply fair; 60% $159, Milwaukee.
Buffalo: Demand fair; trend steady; supply ample; 60% protein menhaden $140 bulk, $145 sacked.
Omaha: Demand and supply good; trend strong; 60% menhaden $145.
Minneapolis: Gulf menhaden, demand good, supply adequate, trend steady, $146@147; 60% blended, demand fair, supply ample, $150@155; 70% herring, demand good, supply adequate, trend firm, $2 a unit, f.o.b. West Coast.
Atlanta: Demand fair; trend steady; supply good; 60% menhaden $125, f.o.b. Atlantic and Gulf producing plants.
Louisville: Demand dull; trend weak; supply very light; $145@150.

HAY

Cincinnati: Demand poor; trend steady; supply adequate; No. 1 timothy $25; second cutting green alfalfa $35; mixed $28; wheat or oat straw $18@19.
Ogden: Supply normal; $1@1.25 per bale; $20 ton in the field.
Boston: Demand and supply steady; No. 2 timothy $41@44.
Wichita: Demand good; supply sufficient; prairie $17.50; alfalfa $20@22.50.
Los Angeles: Supplies light; demand fair to good; U.S. No. 1 $34@36; U.S. No. 2 leafy $32@33; U.S. No. 2 green $32@33; U.S. No. 2 $29@30.
Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; supply sufficient; carlots, baled, No. 1 alfalfa $34@36, No. 2 $32@34; No. 2 prairie $24@26; No. 2 Johnson grass $32@24, delivered Texas common points.
Portland: Demand good; supply ample; trend unchanged; $34.
Philadelphia: Demand slow; supply light; $26@28.
Denver: Demand and trend good; supply just fair; alfalfa, baled $28@29 on new hay, third cutting.
Seattle: Demand good; trend firm; supply fair; alfalfa U.S. No. 2 green $35, delivered truck lots.
Louisville: Demand fair; trend steady; supply good; No. 1 fancy hay, any variety $25@30, No. 2 $2@3 less; straw, any variety $20.

HOMINY FEED

Chicago: Demand slower; trend easier; supply ample; carlots $39.50.
St. Louis: Demand fair; trend steady; supply ample; yellow $41.
New Orleans: Demand slow; trend steady; supply adequate; $44@45.
Cincinnati: Demand fair; trend lower; supply adequate; $43.
Boston: Demand slow; supply steady; $50.50.
Memphis: Demand poor; trend weak; supply ample; white $40, yellow $40.
Buffalo: Demand poor; trend lower; supply good; $45, bulk, Boston.
Milwaukee: Demand good; supply fair; $40, sacked, Milwaukee.
Kansas City: Demand slow; trend steady; supply adequate; yellow $32@32.50, bulk, Kansas City, sacked $4 more; white $1 less.
Seattle: Demand fair; trend steady; supply good; $55, delivered, carlots.
Louisville: Demand very dull; trend steady; supply light; $44.50.

LINSEED OIL MEAL

Chicago: Demand fair; trend steady; supply adequate; carlots, Minneapolis basis, solvent $66, expeller $72.50.
Boston: Demand very slow; supply spotty; 34% $87.50.
Wichita: Demand fair; supply insufficient; 34% $82.50.
Los Angeles: Demand slow; trend unchanged; supply ample; local production, 20% protein $71, bulk.
Philadelphia: Demand and supply fair; 34% $88.50.
Portland: Demand slow; supply ample; trend unchanged; $87.
Cincinnati: Demand poor; trend steady to lower; supply adequate; new process $84; old process $90.
New Orleans: Demand slow; supply ample; trend steady; $84.50@85.
San Francisco: Demand fair; supply ample; $77.50.
Ft. Worth: Demand fair; light offerings; 34% old process $93.50; solvent $86, truck.
Louisville: Demand dull; trend easy; supply light; old process $90, down $2.50; new process $83, down $2.50.
Omaha: Demand slow; trend easy; supply ample; 34% solvent $71.30, bulk; 32% old process $78.30, Omaha basis.
Milwaukee: Demand good; supply fair; old process $83; new process $76.
Minneapolis: Demand fair; supply ample; export shipments good; new process $66 September, $68 October-December; old process $72@72.50 September, $74 October-December.
Seattle: Demand fair; trend steady; supply limited; $90, delivered, carloads, 34% protein (Montana).
Denver: Demand poor; trend firm; supply tight, small crop; $84.94, Denver.
Kansas City: Demand fair; trend firm with supply light; old process meal $73, bulk, Minneapolis; solvent $65@65.50, bulk, Minneapolis.

LIVER AND GLANDULAR MEAL

Omaha: Demand good; trend steady; supply light; 65% $210, Omaha basis.

MALT SPROUTS

Boston: Demand and supply limited; $42.50.
Chicago: Demand quiet; trend easier; supply ample; carlots, No. 1, uneven bags $33.50; bulk $37.50.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $42.
New Orleans: Demand fair; trend steady; supply ample; $40@42.
Milwaukee: Demand good; supply fair; oddweights $35; evenweights $38.

MEAT AND BONE MEAL

New Orleans: Demand and trend easy; supply ample; $86.50@88.
Portland: Demand slow; supply ample; trend unchanged; $1.40 a unit.
St. Louis: Demand fair; trend steady; supply adequate; $84.
Chicago: Demand quiet; trend easier; supply fair; 50% protein, carlots, 100-lb. bags $85.
Boston: Demand and supply steady; $1.15 a protein unit; converted 50% $70.
San Francisco: Demand fair; supply ample; $1.50 a unit of protein.
Wichita: Demand good; supply insufficient; 50% $97.50, f.o.b. plant; 55%, no quotations, no offerings; above average price results from shortage of receipts at plants, coupled with a high demand.
Los Angeles: Demand better; trend unchanged; supply ample; 50% protein $1.60 a unit, bulk.
Ogden: Supply nominal, Swift & Co. workers on strike; $87 ton in 100-lb. bags.
Cincinnati: Demand good; trend steady; supply fair; 50% meat and bone scraps $80, Cincinnati.
Ft. Worth: Demand fair; supplies tight; meat and bone, 50%, f.o.b. or delivered Ft. Worth.
St. Paul: Demand fair; supply ample; $82@85.
Omaha: Demand and trend steady; supply good; $82.50.
Kansas City: Demand good; trend steady; supply light; 50% meat and bone meal $82.50.
Buffalo: Demand fair; trend steady; supply ample; 50% meat scraps $75 bulk, $80 sacked.
Denver: No quotations; out on strike.
New York: Demand and supply fair; trend steady; 50% $67.50, 55% $75, bulk; 50% $70.50, 55% $78, sacked.
Louisville: Demand slow; trend steady; supply good; $80@85.
Seattle: Demand good; trend easy; supply ample; $80, ex-warehouse, 50% protein.

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MILLFEED

Minneapolis: Demand good; supply ample; trend firm; middlings $31.50; bran $32.50, red dog $42.50@44.

Kansas City: Demand fair to good, particularly for sacked shorts which are practically unobtainable; all types in light supply as mills' running time is down; bran $30.50@31, shorts $38@38.50, sacked; bran $25.50@26.25, middlings $27@27.75, shorts $30@30.75, bulk.

Wichita: Demand brisk, with shorts in stronger demand than bran; supply adequate; basis Kansas City: bran $29.75@30.25, shorts $36.25@36.75; bran advanced 50¢ and shorts $1.50, compared with the preceding week.

Ft. Worth: Demand excellent; limited offerings; carlots, burlaps, bran $40, gray shorts $47, bulk middlings $38.50, delivered Texas common points; $2.50 higher on bran, $2@3 higher on shorts and $3 higher on middlings compared with previous week.

Chicago: Millfeeds continue to coast along with nothing much in the way of a feature other than a tendency for red dog to bog down, losing ground on the lighter feeds. Sacked bran and middlings are both about unchanged compared with a week ago, while the bulk has stiffened up slightly—possibly 50¢ ton. Earlier in the week there were reports of some distress bran at outside markets but this had no particularly adverse impact on values in this market. Quotations, Chicago basis, ton, carlots: standard bran, sacked $37.50, bulk $30; standard midds., sacked $36.50, bulk $31; red dog, sacked $43@49.50, bulk $43.50@44.

St. Louis: Sacked, bran $35.50@36, shorts $42.75@43.25; bulk, bran $30.50@31, shorts $35@35.50, middlings $32@32.50.

Omaha: Demand good; trend strong; supply tight; sacked bran $31.50; sacked gray shorts $38.50; bulk standard midds. $28.50, all Omaha basis.

Cincinnati: Demand fair; trend steady; supply adequate; bran $39.50, middlings $42.50.

Boston: Demand very cautious; supply ample; bran $43.50, middlings $45.50.

Buffalo: Traders seem to have struck a level for bran. With prices close to the low for the past 20 years, some were willing to stockpile a bit, but not much. Bran was off $1.50@2 from last week, middlings off 50¢@$1.50 and red dog down $1@1.50. Quotations, Sept. 16: bran, bulk $29@29.50, sacked $36.50@37; middlings, bulk $31.50@32, sacked $39@39.50; red dog, bulk $44@44.50, sacked $49@49.50; the sack differential over bulk was $7.50.

Philadelphia: Demand and supply fair; trend unsettled; bran $44, standard midds. $45.50, red dog $59.

New York: Demand fair; trend lower; supply good; bran $41.50@42, standard midds. $44@44.50.

Memphis: Demand fair; trend steady to higher; supply tight to ample; wheat bran $38.30, sacked; gray shorts $45.30, sacked; standard midds. $34.70, bulk.

New Orleans: Demand fair; trend steady; supply ample; bran, sacked $41.50@42.25, bulk $36.75@37.50; shorts, sacked $46.50@47.25, bulk $41.50@42.25; bulk middlings $37.73@38.50.

Louisville: Demand fair; trend strong; supply ample; bran $41.60, up 50¢; mixed feed $45.10, up $1.50; shorts $48.60, up $2.50; middlings $43.80, up 50¢.

Seattle: Demand fair; trend easy; supply limited; $45, delivered, common transit points, carlots.

Portland: Demand slow; supply ample; trend unchanged; $42.

Denver: Demand active; trend steady; supply ample; shorts $35.25, bran $30.75, mill run $31.50.

Ogden: Supply normal; to Utah and Idaho: red bran and mill run $40, middlings $45; to Denver: red bran and mill run $47, middlings $52; to California: red bran and mill run $47.50, middlings $52.50, f.o.b. San Francisco and Los Angeles.

Los Angeles: Standard mill run $44.50@45.50, bulk, good demand, unchanged trend, supplies not too plentiful; red bran $45@45.50, bulk, good demand, steady trend, supplies tighter.

San Francisco: Demand good; supply tight; millfeed $48; red bran $53.

MINERAL FEED

Ogden: Supply average; $113 ton in 50-lb. blocks; $103 ton, granular, 50-lb. bags.

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Denver: Demand fair; trend steady; supply ample; $155.

Portland: Demand slow; supply ample; trend unchanged; $45.

Wichita: Demand good; supply sufficient; all-purpose with iodine, 50-lb. blocks $97.50, 100-lb. bags $92.50, f.o.b. plant.

Sioux City: 50-lb. mineral blocks 3.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Ft. Worth: Demand good; supply sufficient; all-purpose granules $90, block $97; mineral phosphorus, 6% granules $106, block $113; cattle-sheep mineral, 7% phosphorus granules $100, block $107; hog mineral phosphorus, 3½% granules $87; phosphorus 2% $77 (all in 50-lb. paper bags).

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $35, ex-warehouse.

MOLASSES

St. Louis: Demand slow; trend steady; supply ample; 10¢ gal., New Orleans.

Memphis: Demand poor; trend weak; supply ample; blackstrap 10¼¢ gal., tank car, f.o.b. New Orleans and $24.53 ton, delivered Memphis, truck.

Minneapolis: Demand poor to fair; supply adequate; trend steady; $30.50, tank trucks, delivered.

New York: Demand fair; trend steady; supply good; blackstrap 10¢ gal., tank cars, tank wagons, f.o.b. New York.

Denver: Demand fair; trend steady; supply ample; 10¼¢ gal., New Orleans; $17.53 ton, New Orleans; $20 ton, West Coast.

Atlanta: Demand fair; trend steady; supply ample; citrus $17@20, bulk, f.o.b. Florida producing mills.

Buffalo: Demand fair; trend steady; supply good; 16½¢ gal., f.o.b. Albany.

Kansas City: Demand slow; trend steady; supply ample; 10¢ gal., tank cars, New Orleans, for prompt shipment; 10¼¢ gal. for October forward.

Louisville: Demand good; trend easy; supply normal; 10¼¢ gal., tank car lots, f.o.b. Gulf ports.

Cincinnati: Demand fair; trend steady; supply adequate; 10¼¢ gal.

Boston: Demand steady; supply plentiful; 16½¢ gal. in tank cars.

Los Angeles: Demand good; trend weaker; supply adequate; $20, bulk, f.o.b. tank cars; $20.25, bulk, f.o.b. tank trucks.

New Orleans: Demand good; supply ample; trend steady; 10¼¢ gal., tank cars and trucks; 600-lb. customers drums $2.10.

San Francisco: Demand and supply good; $20, f.o.b. cars, Richmond, Cal.

Ft. Worth: Demand slow; supply sufficient; blackstrap 11¼¢ gal., f.o.b. Houston; delivered Ft. Worth truck $25.94, seller's market price on date of shipment.

Seattle: Demand fair; trend easy; supply good; $20.25, f.o.b. Seattle, tank car lots or truck lots.

NIACIN

New York: Trend steady; 5¢ kilo, 10-kilo lots; $6.20 kilo, 5- and 2½-kilo lots; $6.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Louisville: Demand fair; trend fairly steady; supply normal; reground $23.30, up 25¢; rolled $34.30, steady; feeding $77.30, steady; pulverized white $52.30, down 50¢; crimped $68.30, down $1.

Boston: Demand spotty; supply adequate; white pulverized $56.50; reground oat feed $26.50.

Memphis: Demand poor; trend steady to lower; supply ample; 3½% protein, reground oat feed $20.75.

Los Angeles: Demand slow; trend weaker; supply adequate; local production, pulverized $62.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $55.

Philadelphia: Pulverized white demand slow, supply fair $53; domestic demand slow, supply fair $28; Canadian oat feed demand slow, supply light $26.

Chicago: Demand fair; trend easier; supply ample; carlots, reground oat feed $15; No. 1 fine ground feeding oatmeal $79; feeding rolled oats $77@80.

Minneapolis: Demand poor; supply ample; trend steady; feeding rolled oats $80; feeding oatmeal $68.50; standard pulverized $45.50; crimped $59; reground oat feed $23.

Portland: Demand slow; supply ample; trend unchanged; rolled $65; ground $62; cleaned $64.

Ft. Worth: Demand fair; supply sufficient; 10% protein oat millfeed $39.50@40.50; reground $24@25, September.

Seattle: Demand and supply fair; trend firm; $50, bulk, delivered truck lots (new crop).

OYSTER SHELL

Portland: Demand good; supply ample; trend unchanged; western $34; eastern $39; granite grits $28; shell flour $24.

Louisville: Demand good; trend steady; supply normal; 80-lb. paper bags $23.45; 50-lb. paper bags $23.70; 25-lb. paper bags $25.95.

Los Angeles: Demand fair; trend steady; supply ample; $14.80.

New Orleans: Demand and supply good; trend steady; $24@25.

Cincinnati: Demand fair; trend steady; supply adequate; $24.45.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Boston: Demand and supply steady; in paper $26.

Seattle: Demand and trend steady; supply good; eastern $36, delivered, carlots.

PEANUT OIL MEAL

Atlanta: Demand fair; trend steady; supply limited; 45% $58, f.o.b. Alabama producing mills.

Milwaukee: Demand and supply good; 36% $42.

PEAT MOSS

Portland: Demand slow; supply ample; trend unchanged; $3.30 a bale.

Chicago: Demand quiet; trend steady; supply fair; standard 7½ cu. ft. bales $3.80.

Boston: Demand and supply steady; $3.15 a bale in carlots.

Philadelphia: Demand slow; supply good; $3.80 a bale, f.o.b. pier.

Los Angeles: Demand slow; trend steady; supply ample; Canadian 6.1 cu. ft. bales $3.75.

Seattle: Demand and supply good; trend firm; $2.80 a bale, delivered, truck lots.

San Francisco: Demand and supply fair; $3.65 a bale.

POTASSIUM IODIDE, U.S.P.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures: 250-lb. drums $1.35; 200 lb. in 100-lb. drums $1.35; 100-lb. drums $1.38; 25-lb. drums $1.41, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Atlanta: Demand good; trend steady; supply ample; meat meal $80.50, f.o.b. Alabama and Georgia producing mills.

Salisbury Md.: Demand good; supply limited; $90, f.o.b. bulk.

Boston: Demand fair; supply light; $82, f.o.b. shipping points.

Los Angeles: Demand fair; trend steady; supply adequate; $1.45 a unit of protein.

Ft. Worth: Demand good; supply moderate; 55% protein $82.50, f.o.b. north Texas plants.

RIBOFLAVIN

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gram in less than ton lots in 3.36 to 16 gm./lb. mixtures, 3¢ in ton lots or more; freight prepaid or paid to destination.

New York: Trend steady; feed grade (in feed supplements) 4½¢ gm. in 3.36 to 16 gm./lb. mixtures; freight prepaid or paid to destination.

RICE BY-PRODUCTS

Atlanta: Demand fair; trend strong; supply limited; bran $43, delivered.

Los Angeles: Demand fair; trend firm; supply very limited; California production, high fat content, bran $53.

Ft. Worth: Demand slow; offerings light; new crop beginning to move; carlots, rice bran $33@34, f.o.b. south Texas rice mills; hulls $3.50, f.o.b. mills.

San Francisco: Demand good; supply ample; bran $45; polished $49.

SCREENINGS

Chicago: Demand slightly better; trend higher; supply ample; carlots, ground grain screenings $31; Canadian $23.40.

Minneapolis: Supply tight; demand slow; Canadian $19, nearby; flax screenings $40, basis 15%; lights $4@10; mediums $11@20; heavies $21@35.

Cincinnati: Demand fair; trend steady; supply adequate; ground grain screenings $35.

Ft. Worth: Demand good; supply extremely limited; ground mixed grain $29.

Buffalo: Demand poor; trend steady to lower; supply fair; ground and sacked $34, New York, lake and rail; unground in bulk $28.75, New York.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUMS

Los Angeles: Demand steady; trend weak; supply ample; milo $2.12½ cwt., bulk.

Ft. Worth: Demand good; supply sufficient; carlots, bulk, No. 2 yellow milo $1.90@1.92, delivered Texas common points.

SOYBEAN OIL MEAL

Kansas City: Demand good for nearby shipment, but no interest in forward booking at present prices; feed mixers' ideas $2.50@3.50 below current market; for Kansas City area shipment $48.50@49, bulk, Decatur.

Omaha: Demand slow; trend easy; supply ample; 44% $54.60, bulk, delivered Omaha.

Milwaukee: Demand good; supply fair; $51.50, bulk, Decatur.

Atlanta: Demand fair; trend steady; supply good; 44% $60.10, bulk, delivered.

Denver: Demand just fair; trend weak; supply ample; $66.14, Denver.

Seattle: Demand fair; trend easy; supply ample; $78, delivered, carlots.

Louisville: Demand slow; trend weak; supply normal; $61.70, down $3.50.

Ogden: Supply normal; $84@89.

Los Angeles: Demand slow; trend weaker; supply more plentiful; $71.90@72.40, bulk.

San Francisco: Demand good; supply ample; $78.40.

Wichita: Demand poor; supply adequate; 44% $63, 50% $70, f.o.b. Wichita.

Portland: Demand slow; trend lower; supply ample; $46.50, f.o.b. Decatur.

Boston: Demand slow; supply ample; bulk, f.o.b. Decatur, 44% $48.50, 50% $53.50.

Cincinnati: Demand poor; trend steady to lower; supply adequate; $51.50, bulk, Decatur.

Philadelphia: Demand and supply fair; 44% $49.50, bulk, Decatur.

Chicago: Unsettlement continued to pervade the local soybean oil meal market during the week ending Sept. 16. The government crop estimate Sept. 1 failed to meet the anticipations of many in the trade who expected that the same climatic conditions that brought about a 200 million bushel increase in the corn prospect during August would have similar impact on the growing bean crop. Now, with the possibility of an early freeze catching some late planted fields, there is uncertainty about the ultimate soybean crop's size. Prices, however, weakened all along the line. Quotations, Decatur basis, ton, carlots: 44% protein unrestricted billing $51@51.50; eastern restricted $48.50; 50% protein unrestricted $56.50@57.50 and eastern restricted $53.

Minneapolis: Demand thin; supply ample; weakening trend; $43.50@44, bulk, Decatur.

New Orleans: Demand slow; supply ample; trend steady; $62@62.50.

Memphis: Demand poor; trend lower; supply ample; prime 44% solvent $60, f.o.b. Memphis.

St. Louis: Demand slow; trend lower; supply ample; 44% $59.

Ft. Worth: Demand fair; supply sufficient; carlots, 44%, September $67.50@69; 50% protein, September $73.50@75; truck, 44% $68, 50% $75, prompt; 44% $63@64, October-November-December.

TANKAGE

Wichita: Demand good; supply insufficient; 60% $92.50, f.o.b. plant.

St. Louis: Demand fair; trend steady; supply adequate; $84.

Cincinnati: Demand fair; trend steady; supply fair; 60% digester $82.50, Cincinnati.

St. Paul: Demand fair; supply ample; trend steady; $84@86.

Omaha: Demand and trend firm; supply good; $82.50.

Kansas City: Demand good; trend steady; supply tight; 60% digester $80.

Louisville: Demand slow; trend steady; supply good; $85@90.

Chicago: Demand fair; trend easier; supply ample; carlots, 100-lb. bags, 60% protein $85.

New Orleans: Demand fair; trend steady; supply light; $94@95.

Ft. Worth: Demand fair; supply short; 60% digester $80, Ft. Worth.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand excellent; offerings limited for nearby shipment; 5%¢ lb., f.o.b. north Texas area.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.50; in 25-lb. drums $1.55; freight allowed to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

WHEAT GERM MEAL

Buffalo: Demand poor; trend steady; supply fair; commercial grade $58, f.o.b. Buffalo.

New Orleans: Demand fair; trend steady; supply fair; $64@66.

Minneapolis: Demand poor; supply ample; downward trend; $48@50.

QUAKER

(Continued from page 1)

previous year, President Donold B. Lourie and board chairman R. Douglas Stuart said in their report to stockholders.

Comments on the firm's feed business included the following:

"Livestock and poultry feed volume this past fiscal year was the largest in our history. Following a long range plan of manufacturing and distribution worked out after a thorough study of the ever changing feed situation, new production units were completed at Asheville, N.C., and Jasper, Ala.

"As our volume on livestock and poultry feed increases, our receivables increase proportionately. The extension of credit continues to play an important part in the industry, while farm units increase in size and feeding becomes more specialized. Our receivables are being supervised carefully and are in sound condition.

"The lower cost of bulk feeds, both in the initial cost and in handling, has led to substantial investment by dealers and feeders in mechanized equipment. A great part of the poultry industry has been converting to bulk feed very rapidly, with a resultant lowering of feed and labor costs. Up to 70% of the output of some of our plants is being shipped to the trade in bulk cars or trucks. Labor availability and economic pressures to lower costs of producing meat, milk and eggs are continuing to accelerate the trend toward bulk feeds."

Commenting on the company's record sales and earnings figures, the report pointed out that after preferred dividends, the net income amounted to $3.29 per share on the common stock as compared with $3.22 per share the year before.

Earnings before provision for federal and foreign taxes were down $1,402.951. but the tax provision was down $1.652,000 because the previous year included additional provision for prior years. This was the seventh consecutive year in which net income exceeded the previous year. Common and preferred cash dividends during the year amounted to $8.397,827—up $866,090 from the previous year.

In addition to certain food products, Ken-L-Ration dog food and Puss 'n Boots cat food continued as leaders, stockholders were told. "To strengthen our position in the pet food market," the report said, "we are adding other varieties to the line —Ken-L-Burger for dogs and Meat Flavored Puss 'n Boots for cats. We are also marketing nationally an improved Ken-L-Meal to keep pace with the rapidly expanding dry dog food business. Our other dry dog foods,

Ken-L-Biskit and Ken-L-Treats, continue to do well."

The report also told of changes in distribution of pet foods and cereals, including new warehouse facilities.

Overall sales outside the U.S. of consolidated and non-consolidated companies were $83 million, up 5%.

Additional feed production facilities have been added in Quebec, it was pointed out.

Total research expenditures the past year were more than $2.5 million.

New pet food research facilities are under construction on property adjoining the livestock research farm.

ANTIOXIDANTS

(Continued from page 1)

changes permitted without a supplemental application are those "that are not significant from the standpoint of the safety of the new drug." However, these changes are made on an individual basis through the feed manufacturer's writing to FDA.

It was noted that before issuance of the Aug. 14 regulation, many formulas had been "frozen" because the government disallowed changes in supplemental new drug applications for feeds containing arsenicals.

"This situation," a Monsanto spokesman explained this week, "had hampered sales of Monsanto's Santoquin, cleared by the FDA last February for safe use in poultry feeds, since most of these feeds contain arsenicals.

"The FDA's August regulation indicated a 'thaw' of the restriction on medicated feeds but needed clarification. The American Feed Manufacturers Assn., in its Aug. 14 bulletin on the subject pointed out that there was 'no indication of how liberal or strict the FDA planned to be in its interpretations.'

"Monsanto, endeavoring to learn this in behalf of Santoquin in particular and the feed industry in general, obtained the cooperation of several feed mills in seeking FDA clearance of the addition of Santoquin to feeds containing arsenicals and new drugs. FDA approval was obtained without supplemental new drug applications in all of these test cases.

"We know of no instance since Aug. 14 in which the FDA has disallowed the addition of Santoquin to feeds containing arsenicals and new drugs, and we know of many such requests for approval in that time."

The Monsanto spokesman said this substantiates the firm's view that "substitution of Santoquin for other antioxidants is a 'minor' change within the safety provisions of the new regulations."

FDA has declined to issue a general statement that a change in antioxidants, or any change in the non-drug portion of the feed, would be considered "not significant" in all possible cases. It was pointed out that the agency will continue to consider such proposed changes on an individual basis.

"Monsanto," the spokesman said, "definitely views the new regulation as opening to it again the full potential market for Santoquin in poultry feeds."

(Meanwhile, reports indicated that the Aug. 14 FDA statement will mean that cleared or exempted food additives may be combined with a "new drug" without changing the status of the new drug. It may be noted that Santoquin was previously cleared under food additive provisions.

(It is expected that the agency will now permit combinations of certain other chemicals with "new drugs" if there is no question about the safety of the combination.)

ROTATION CROSSING

BROOKINGS, S.D. — Systematic rotation crossing appears to be an efficient program for producing market hogs, according to research conducted by the South Dakota State College Agricultural Experiment Station.

SWINE

(Continued from page 1)

uing increases over a year earlier. Half of the corn belt states indicate the same number of sows will be farrowed during the 1960 winter quarter as farrowed a year earlier, while decreases are expected by the other half.

● The number of all hogs and pigs as of Sept. 1 was 5% greater than a year earlier.

● Farmers are reacting to hog price levels as usual.

Interpretation

Interpretation of the quarterly pig crop report brings out the following points:

1. The outlook on hog prices is bullish. The hog price slide seen in some quarters as low as $10 in terminal markets cannot now be expected and it is believed that a seasonal bottom of $12@13 will not break. The report also casts some doubt that USDA will be forced into a pork buying support program other than that under Section 32 later this winter.

2. The report casts a bearish aspect on the price of soybeans, since it means a reduction in demand for soybean meal later. USDA officials at the operating level, supported by important trade opinion, feel that soybeans may now get the price advance that this reporter has previously anticipated for March-May contracts, although in its recent bean sales announcement for October-December, 1959, USDA stated it will price its sales of beans at 20¢ bu., national average, over county loan rates in the new loan program of $1.85 bu. This re-sale level is well above the Chicago contract market and probably means that USDA is priced out of the current market at least until Dec. 1, 1959. What price USDA may assign after that date is not disclosed.

Speculation on a probable lower price decision for USDA beans after Dec. 31 on the part of informed trade groups must be discounted following the pig crop report which came later after those opinions were expressed. USDA officials say that the pig crop estimate diminishes the necessity of any pork buying for price support purposes this winter.

They say further that this report must now be sustained by USDA policy and that USDA must gear its operations to back up the swine producer who has been led into voluntary decisions because of the market.

3. Notwithstanding the reversal of the trend on swine production—which cannot be removed from feed demand outlooks—there still is expected to be a heavy use of feed grains and also soybean meal.

4. What shall Mr. Soybean Farmer do? Will he be an eager selier of beans? On the contrary, say USDA economists. They contend that both the crusher and the farmer will see in beans a good property, and unless the market is satisfactory, they will hold beans—meaning that, at the harvest, crushers will buy beans at or above current price levels and the farmers will hold their beans against what has been the normal crop year advance in that crop.

5. The oil donation program still is in doubt. USDA has not yet found the means to wiggle out of this provision of the extension of Public Law 480, which makes mandatory donation of edible oils and animal fats for domestic donation programs.

Most recent news does not remove the foggy atmosphere about the hog-soybean-cottonseed end products complex which has existed. There still remain the political connotations.

Apparently, through an unsuspected act of the omnipotent or perhaps even administration luck, the swine

Sows Farrowing, Selected Corn Belt States

State	—June through November total— Average 1948-57	1958	1959†	1959 as % of 1958	—December through February$— Average 1948-57	1958	1959	1960*	1960 as % of 1959
	—1,000 head—			%	—1,000 head—				%
Ohio	338	311	330	106	121	142	160	160	100
Indiana	528	527	532	101	226	301	315	305	97
Illinois	625	782	813	104	188	325	363	363	100
Wisconsin	181	223	219	98	57	96	121	121	100
Minnesota	288	378	412	109	74	139	188	147	78
Iowa	934	1,169	2,251	107	246	460	537	537	100
Missouri	422	478	516	108	142	205	225	218	97
South Dakota	65	110	104	95	17	40	53	53	100
Nebraska	168	215	217	101	51	95	121	104	86
Kansas	103	106	107	101	39	53	62	55	89
Total 10 states	3,652	4,299	4,501	105	1,162	1,856	2,145	2,063	96

*Number indicated by breeding intentions reports.
†Sum of June through August farrowings and September through November intentions to farrow.
$December preceding year.

farmers have taken Mr. Benson off a most unpleasant hook.

The text of the Sept. 1 pig crop report follows:

FALL SOWS IN 10 STATES UP 5%—The number of sows farrowed and intended to farrow in the fall of 1959 (June through November) for 10 corn belt states is 5% larger than in 1958 and 23% larger than the 1948-57 average, according to the crop reporting board.

The number is now estimated at 4,501,000 for the 10 states (Ohio, Indiana, Illinois, Wisconsin, Minnesota, Iowa, Missouri, South Dakota, Nebraska and Kansas). Farrowings are above a year earlier in eight states but below last year in Wisconsin and South Dakota. Increases are 9% in Minnesota, 8% in Missouri, 7% in Iowa, 6% in Ohio, 4% in Illinois and 1% in Indiana, Kansas and Nebraska. The Sept. 1 survey indicates a decrease of 2% or 95,000 sows from the farrowing intentions reported for these states as of June 1, 1959. The 10 states included in this report accounted for 75% of the U.S. 1958 total pig crop.

JUNE - AUGUST FARROWINGS UP 4%—Sows farrowed in the 10 states during June, July and August totaled 2,426,000 head, 4% more than during the same period a year earlier. This was 1% less than was indicated for this period in June.

June-August farrowings for these states represent 54% of the estimated June-November total compared with the average of 50%. Farmers' reports indicate that the number of sows farrowed in June and July were larger than for the same months a year earlier, while August farrowings declined slightly.

SEPTEMBER - NOVEMBER INTENDED FARROWINGS UP 5%—Sows bred and intended for farrowing in September, October and November this year in the 10 states totaled 2,075,000 head—5% more than a year earlier and 14% above average. This is 3% less than the farrowing intentions reported for these states in June. The decrease from June intentions occurred in the western corn belt states.

DECEMBER-FEBRUARY INTENTIONS DOWN 4%—Reported breeding intentions indicate 2,063,000 sows to farrow during the 1960 winter quarter (December, 1959, through February, 1960) compared with 2,145,000 sows farrowed during the same period a year earlier. Five states, Ohio, Illinois, Wisconsin, Iowa and South Dakota, indicate the same number of sows will be farrowed during this quarter as farrowed a year earlier, but decreases are intended in the following states, generally in the western corn belt: Minnesota, 22%; Nebraska, 14%; Kansas, 11%; Indiana and Missouri, 3%.

ALL HOGS AND PIGS UP 5%—The number of all hogs and pigs on farms Sept. 1, 1959, in nine states totaled 47,286,000 head. (Data for Missouri for 1958 are not available on a quarterly basis.) This is 5% more than the 45,234,000 head a year earlier.

All states except Wisconsin have more hogs on farms this September than a year earlier. Increases range from 2% in Indiana to 8% in Nebraska. Hogs and pigs six months old and over totaled 8,640,000 head, 6% more than last year. This reflects the increase in sows and gilts held for fall farrowings.

The number under six months of age was 5% more than last September. Pigs 3-6 months of age were 5% above those held a year earlier. Pigs under three months of age were 3% above a year earlier, while sows farrowed June-August were 4% above last year. This indicates a decrease in litter size compared with a year earlier.

The 15,393,000 pigs under three months old on farms Sept. 1 accounted for 33% of all hogs. Pigs 3-6 months of age totaled 23,253,000 head, or 49% of all hogs.

ANTIBIOTIC

(Continued from page 1)

tory disease (CRD) of chickens and infectious sinusitis of turkeys.

Tylosin, he added, also has significantly stimulated weight gains of both swine and poultry.

Research is being continued at Lilly's agricultural research center at Greenfield, Ind., to determine the effectiveness of the new antibiotic in controlling both plant and animal diseases. Experiments are also being conducted to further evaluate its potential uses in livestock and poultry nutrition, Dr. Downing said.

FEEDING YARD CLOSED

EMPORIA, KANSAS — Livestock feeding facilities operated by the Santa Fe Railroad here have been shut down. In connection with the shutdown, it was announced that a tract, barns and elevator have been sold to a group of investors. The Anderson Cattle Co., which operates a large feedlot adjacent to the property, will be the resident operator of the enterprise, it was indicated.

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STORAGE SURVEY

(Continued from page 5)

put into effect in 1939, and there have been many changes and renegotiations since that time. The present agreement was put into effect in 1956.

"We have been able to get the storage job done under terms of the present agreement, so there was no reason to renegotiate up to now," Mr. Palmby said. "We purchased no bins last fall, and we are in a comfortable position for the foreseeable future."

Mr. Hanson stressed that the survey was designed by expert technicians in the USDA, utilizing experience from previous grain storage cost studies and adapting this knowledge to the needs of the present study.

"It would have been better if we could have engaged an outside group to conduct the survey, but we have the personnel available to do the job," he said.

Care has been taken to select a proper panel of warehouses to be interviewed, he said. A total of 450 country elevators will be studied along with 427 terminal elevators. Results of these interviews can be projected to within ¼ of 1% of statistical error when applied to the entire grain storage industry, Mr. Hanson said. Survey plans have been approved by the Bureau of the Budget.

Interviewers will be accountants who possess good judgment, and they will be given an intensive training for 10 days before going into the field. A pre-test is now being conducted at 30 elevators.

"Our tabulations can be examined by anyone, but no one will have access to information on individual firms," Mr. Hanson said.

Statement Modified

This latter statement was modified by Mr. Hanson in later questioning. Asked if the tabulations will be available to the trade, Mr. Hanson replied that a decision on publishing the results has not yet been made. However, he said that people representing the grain trade will be told how survey conclusions were reached and that they will be given adequate time to study the results prior to the negotiations.

Here are some of the other questions fired at CSS officials:

Question: How will the results be tabulated?

Mr. Hanson: We may use punch cards, although that hasn't been definitely decided.

Question: Will we be given a copy of the questionnaire before the survey starts?

Mr. Hanson: No. The questions may be misunderstood or interpreted incorrectly, and this would throw off the survey results.

Question: Will the grain men interviewed be given a copy of the results on their individual interview forms?

Mr. Hanson: Yes.

Question: The Northwest Country Elevator Assn. has adopted a policy that country line elevators asked to participate will refer interviewers to the main offices of the firms at Minneapolis. Will this create any problems for CSS?

Mr. Hanson: We will get information from the proper sources.

Question: What if your interviewers don't get answers from some operators?

Mr. Hanson: Statistical methods will make allowances for this. They will be counted as an absence of a return.

Question: Will news releases be issued when interviewers plan to visit an elevator?

Mr. Hanson: No. The warehousemen will be informed and a suitable appointment time made.

Question: How long will an individual interview take?

Mr. Hanson: We are allowing three days for each interview.

Question: How will you differentiate between costs of flat and concrete storage?

Mr. Hanson: The results should balance out to get an average figure for depreciation.

Question: How can you compare costs of a flat-storage operator who is open only one month of the year for the corn takeover with an operator who is in business the year around?

Mr. Hanson: The results should give each the proper weight in the survey. If there is any way to break out these different costs, we will try.

Question: When will the interviews start?

Mr. Hanson: Sometime late in October.

One grain man who participated in a "pilot" survey commented from the floor that "the study didn't tell us how much it cost to store grain and showed that our feed mill was losing $1,500 a month." He urged grain men who are interviewed to use normal depreciation schedules and not the fast write-off permitted for tax purposes.

Mr. Hanson commented that the questionnaire had been changed quite a bit since the pilot study was made.

Mr. Palmby summed up the session with this comment: "We will negotiate a contract. It will be a good one and we will uphold it. We cannot refuse to make contracts with new people. The contract includes incentives. We are determined that the private grain trade will do the job of storing government grain. The contract will be attractive enough to encourage expansion of storage space, but it will not be so attractive that we cannot defend it."

Seaway Discussion

"The St. Lawrence Seaway is not a 'flash' but something that can be expanded and developed . . . it is an economic method of transportation and will be a great factor in merchandising, with a substantial increase in volume in the next shipping season."

These were opinions expressed by government and industry representatives in a panel session covering "Economic Impact and Operational Challenges of the St. Lawrence Seaway on the Grain Trade."

The panel participants were Robert Haldeman, transportation section, Agricultural Marketing Service, USDA, Washington, D.C.; C. J. Harriss, Continental Grain Co., New York; F. R. Hediger, Garnac Grain Co., New York, and Charles B. Green, Globe Elevators, Duluth, with Ron Kennedy, F. H. Peavey & Co., Minneapolis, chairman of the panel session.

All the panelists were in agreement that, everything considered, the seaway was a sound project and that its use would increase in the future, but suggested that improvements and construction of new facilities were needed.

Truck and railway carrier competition was covered in the panel session. Here it was pointed out that the trend to the use of trucks was continually increasing and could only be offset by the willingness of the railroads to compete pricewise. The panelists noted that the railroads are proposing drastic reductions in rates to meet truck competition with at least one line discussing a 50% cut in rates. It was also noted that the Minneapolis and St. Paul barge traffic was increasing and would probably continue to expand.

By-Laws Amended

Amendments to the by-laws were approved at the business session changing the annual meeting date to a period between Feb. 1 and March 31 and setting the fiscal year of the corporation to commence on Feb. 1, beginning with 1960, to coincide with the change in date of the meeting. Other changes limited members of the committee on arbitration appeals to those "who are directors or have served as directors," and set definite qualifications of directors appointed by an affiliate association member.

A resolution adopted at the business session stated that "with respect to continued efforts of some groups to persuade federal government agencies to take the lead in forcing a national change from the bushel basis to a hundredweight basis of grain trading, this association reaffirms its request that no unilateral action along this line be taken by government." The resolution stated that this "should be a matter to be worked out within the trade, rather than forced by government."

Other resolutions called for a steadfast support of "a competitive farm marketing economy" favored "full equity under the income tax laws in the treatment of cooperative corporations and other corporations competing in the grain and feed business," and urged continued work with responsible farm organizations.

In connection with rail carriers, resolutions urged that reduced rates be made applicable to all grains and grain products rather than specific grain and urged railroads "to desist from the policy of piecemeal grain rate reductions and to substitute a policy of reducing grain rates nationwide by uniform percentage decreases."

Officials Reelected

All officers of GFDNA were reelected to serve until the next meeting in March. They are: Madison Clement, Clement Grain Co., Waco, Texas, president; Charles Force, Little Brothers, Kalamazoo, Mich., first vice president; H. V. Nootbaar, H. V. Nootbaar & Co., Pasadena, Cal., second vice president, and George Forrester, Forrester Grain Co., Toledo, Ohio, third vice president. Alvin E. Oliver and Herbert L. Sharp, Washington, D.C., are executive vice president and secretary-treasurer respectively. E. G. Cherbonnier, St. Louis, is feed advisor.

Four directors named to serve to 1961 are: John J. Frazier, Jr., P. R. Markley Co., Philadelphia; Leon M. McCorkle, Waldo Supply Co., Waldo, Ohio; Walter Blanton, Blanton Grain Co., Carrollton, Texas, and James Holmquist, Holmquist Elevator Co., Omaha.

The 1960 annual meeting of GFDNA will be held in Kansas City, Mo., March 6-8 and the 1961 meeting will be held in Washington, D.C., for the first time in the history of the association.

ELEVATOR DESTROYED

VERMILLION, S.D.—Fire recently destroyed a grain elevator here and spread to another firm's elevator. Estimates were that the loss totaled between $250,000 and $300,000. Don Peterson, Bartlett & Co. employee, said the fire apparently started in the boiler room of a feed mill operated in conjunction with the elevator.

Chicks Placed in Principal Broiler Areas

(000's omitted)

Week ending	Maine	Conn.	Penn.	Ind.	Ill.	Mo.	Del.	Md.
July 11	1,222	551	719	854	109	754	1,778	1,894
July 18	1,202	607	833	825	129	908	1,591	2,055
July 25	1,217	629	690	878	108	865	1,625	2,001
August 1	1,160	614	718	797	111	845	1,550	1,898
August 8	1,163	470	673	736	130	857	1,573	2,033
August 15	1,054	485	757	791	103	815	1,742	1,782
August 22	980	420	859	767	138	805	1,607	1,967
August 29	1,048	469	714	710	100	768	1,569	1,934
September 5	1,061	427	774	604	156	724	1,326	1,871
September 12	838	352	724	633	111	627	1,419	1,718

Week ending	Va.	W. Va.	N.C.	S.C.	Ga.	Fla.	Ala.	Miss.
July 11	993	550	2,919	351	6,573	172	3,394	2,370
July 18	1,117	565	2,930	366	6,554	160	3,363	2,292
July 25	1,272	515	2,764	354	6,298	187	3,295	2,214
August 1	1,026	484	2,576	331	6,033	144	3,177	2,132
August 8	1,116	445	2,551	348	5,807	158	3,098	2,045
August 15	1,009	528	2,660	292	5,730	177	2,973	2,169
August 22	1,060	463	2,581	272	5,370	205	3,019	2,035
August 29	1,001	486	2,396	303	5,331	170	3,034	1,780
September 5	984	467	2,405	263	4,812	213	2,906	1,664
September 12	896	386	2,355	257	4,668	234	2,568	1,618

Week ending	Ark.	La.	Texas	Wash.	Oregon	Calif.	Total 22 areas 1959	Total 22 areas 1958
July 11	3,525	386	2,301	306	238	1,021	32,980	34,912
July 18	3,483	367	2,157	351	207	945	33,007	33,846
July 25	3,597	423	2,142	303	237	1,017	32,626	33,378
August 1	3,358	379	2,250	287	213	913	30,996	32,440
August 8	3,287	374	2,014	335	165	959	30,337	32,003
August 15	3,077	413	2,073	340	186	878	30,034	31,232
August 22	3,024	366	2,028	292	161	888	29,307	30,025
August 29	2,869	391	1,975	277	200	800	28,325	28,883
September 5	2,769	366	1,870	317	121	839	26,939	28,117
September 12	2,657	318	1,895	282	177	852	25,585	27,265

Causes for a Slower Increase in U.S. Beef Breeding Herds Cited

DENVER, COLO.—Weather, practical range management and wariness of the future are serving to slow the rate of increase in the nation's beef cattle breeding herd, a survey of several thousand ranchers indicated recently.

The poll was conducted among members of the American National Cattlemen's Assn. It was designed to find out what ranchers planned about culling their cow herds this fall.

Nearly 10% of the 5,000 ranchers contacted responded, with 28 states represented. Four-fifths of the respondents indicated they either were going to hold their cow herds at normal size (62%), or were going to make cuts (18%). The other 20%, most in the former drouth riddled Southwest, planned continued restocking and increases in cow herd sizes.

Older Cows

The majority of those planning normal operations said they did not vary cow herd sizes through good times or bad, only with drouth, but many stated they were planning deep cuts into the older cows and larger than normal replacement with heifers. Normal culling was indicated by 62%, 31% said they were going to cull considerably more than usual, and 7% planned less culling. The size of the herd apparently made little difference in culling plans.

No pattern could be established in whether cuts or increases were coming mostly in small or large herds—the weather and range conditions appeared to be the biggest factors no matter what the size. Scattered dry areas in California, the Dakotas, Nebraska, Colorado, Wyoming, Utah, Nevada and Oregon were blamed by most of those planning reductions—or who had already cut.

Good rains and grass in former drouth areas of Texas, New Mexico, Arizona, Nebraska, Montana and Colorado were encouraging growth plans for most of the ranchers reporting intentions to increase their breeding herds. Others mentioned long-range plans which had little or nothing to do with weather, prices or national trends.

NORWEGIAN VISITOR

KANSAS CITY—Arnbjorn Laerdal, of A/S Froy, Stavanger, Norway, feed manufacturing firm, visited the office of the Midwest Feed Manufacturers Assn. in Kansas City recently and called on feed manufacturers in the vicinity. Mr. Laerdal was accompanied by his son, Osm. A. Laerdal, currently a student in the University of Wisconsin graduate school.

MARKETS

(Continued from page 2)

increase in corn production will cast a shadow over the potential call for mixed feeds later this year.

South Central

Although the calendar shows that it's past the usual time for feed demand to snap out of its hot weather slowdown, little pick-up is in evidence this week. Business is as slow as it has been anytime during the past six weeks. Running time for a number of the mills is no better than four days.

A moderate increase in business had been expected in advance of the fall harvest movement. But, feed grains have matured unusually well this year and the consumption trade undoubtedly is using a heavy percentage of home grown grains in place of formula feeds. Dealers are cautious in buying, anticipating pressure on prices as marketing expands.

Most of the orders coming in lean heavily to hog feeds, although turkey feeds are providing a fair source of volume for some mills. Egg feed demand refuses to enlarge even though prices for extra large eggs are at the highest point of the year.

Ohio Valley

Although delightfully cooler weather descended on the Ohio Valley this week, and the aura of autumn definitely is in the air, it had no noticeable effect on sales of formula feeds, despite the increased consumption of feeds by farm animals now that the extremely hot weather no longer prevails.

Instead, the market continued in the static position of previous late-summer weeks, and the continuing availability of pasturage and the abundance of farm crops of all kinds makes it appear likely that there will be only limited demands for mixed feeds until much colder weather arrives in late October.

After having fluctuated but slightly for several weeks, farm prices for eggs advanced sharply at mid-week, with A jumbos, the most popular size and grade, climbing from a low of 40¢ doz. a week ago to 57¢ doz.

Substantial decline in valley farm flocks of chickens, and the consequent steady decline in egg production, was cited as the reason for the current price increases. These are expected to be the forerunner of further price upturns during coming weeks as colder weather inspires increasing human consumption.

Mountain States

Formula feed dealers reported this week that the cattle business is starting to pick up and turkey business is dropping off, therefore cattle feeds are up somewhat from the previous week and are improving in sales. Some of the range fellows are starting to buy feeds now, partly due to the extreme dryness. The dryness has also kept the dairy feed end of the business moving.

Pacific Northwest

Prices for principal ingredients averaged lower during the week's Pacific Northwest feedstuffs market trading as the continued reflection of seasonally slow buying interest at Portland and Seattle.

The over-all demand was definitely on a hand-to-mouth basis with the supply of most ingredients fully ample. However, some feed grains such as oats and barley were in limited supply and sold 50¢@$1 ton higher.

Corn listings were cut as much as $2.50 ton lower with milo prices down $3 for the week. Soybean meal listings declined $1.50 ton with cottonseed meal values down $1.

Most brand feeds are now priced $1 @2 ton lower at Portland and Seattle than two weeks ago as the reflection of lower ingredient costs. This has made for more favorable feeding ratios and coupled with cooler temperature and occasional rain showers is having a tendency to expand area feeding requirements.

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Nutrena Plans Open House at New Plant

LENNOX, S.D.—Nutrena Feeds' recently completed production plant here will open its doors to the public Sept. 24-25, with tours, free lunch, prizes and merchandise discounts, according to Walter Brigger, Nutrena manager.

Demonstrations will include bulk truck loading, livestock handling in Pigloo and Calfloo units (isolation "houses" in which animals are protected from disease and injury) and actual feed production.

The mill currently is producing at a rate of 40,000 tons annually, Mr. Brigger said, and can triple that output by round-the-clock operations.

Nutrena's complete line of bulk and bagged feeds is available with largest production volume now devoted to poultry, swine and cattle formulas.

Plant visitors will see mixing, pelleting and crumblizing, and handling equipment, four 50-ton raw ingredient storage bins, a number of smaller ingredient bins, and twenty 25-ton finished feed bins located over a 50-ft. truck-loading scale. Two bulk trucks—one eight-ton capacity and the other 20-ton—assigned to handle the estimated 90% of production devoted to bulk feeds, will be used to demonstrate loading techniques and delivery services.

Also on display will be a suction conveyor for unloading rail cars and trucks, an automatic scale-printer device that permanently records the amount of each ingredient mixed into individual batches of feed, custom grinding and mixing equipment, a new sacked feeds warehouse and general offices.

Bemis Bag Plans New Plant in Newark, Cal.

ST. LOUIS, MO.—Bemis Bro. Bag Co. has announced plans for the construction of a new one-story manufacturing plant in Newark, Cal., to replace the company's San Francisco plant.

The structure, which will occupy 155,000 sq. ft. of a 17-acre tract, will be one of the key production units for the company on the West Coast, according to F. G. Bemis, president.

The new plant, which will manufacture multiwall, burlap, cotton, open-mesh and waterproof laminated-textile bags, will be the seventh new Bemis plant built in the past six years.

Sales offices presently located at the San Francisco plant will be relocated in downtown San Francisco.

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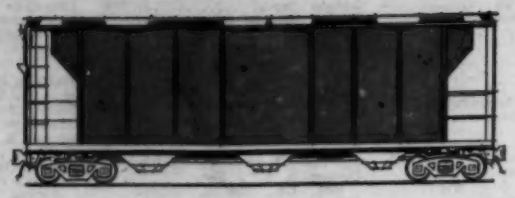

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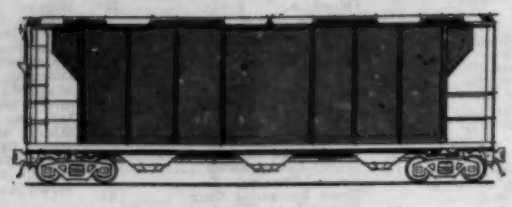

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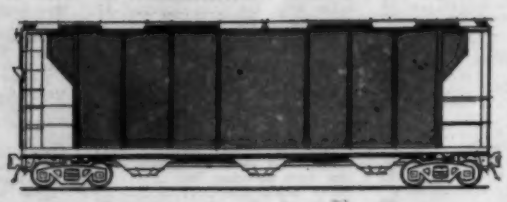

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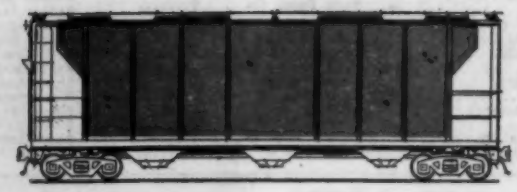

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